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ABSTRACT

Presented is a bibliography of publications related to the application of the social sciences to various aspects of forestry. The major categories under which documents are classified involve social science as it applies to: 1) forestry in general; 2) forestry's productive agents; 3) forest production; 4) manufacturing; and 5) marketing, trade, and demand for forest output. Each entry includes a brief abstract and listing of the author, date, source, and number of pages. Documents are primarily from the United States and foreign professional journals, and publication lists of United States Forest Service experiment stations. A subject index and an author index are provided. (JN)

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SOCIAL SCIENCES in FORESTRY

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A Current Selected Bibliography

No. 58 June 1982

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SOCIAL SCIENCES IN FORESTRY

Subject-Matter Classification Scheme

Note: This outline is regarded as working for the most part from the general to the specific. Material covering two or more sections of this outline is classified in the most general of these sections. Material which is classifiable in any of two or more sections is classified in the most specific of these sections. *Asterisks mark those subjects which are not represented in this issue.

I. SOCIAL SCIENCE APPLIED TO FORESTRY AT LARGE

A. General principles, scope, content, method

B. History, status, prospects of forestry in an area, society in an area (This section includes material on forest resources alone, as opposed to that on consumer or intermediate resources alone, for which see appropriate sections.)

1. General
2. United States, Canada
3. Other north-temperate nations
4. South-temperate nations
5. Nations in lower latitudes

C. Law, politics, policy, plan, program, and their administration

D. Other influences

1. Taxation

a. General
b. Property, general and special; severance; lieu payment
c. Income, inheritance, other

2. Valuation (See also IIIA2i)
*3. Insurance
4. Social interest, value system, custom, folklore, culture
*5. Characteristics of the individual
6. Public relations, other

E. Research (For research on specifc topics, see those topics.)

F. Professional and subprofessional affairs, education, employment of foresters

G. Social and economic development (See also IB)

H. Environmental concern

II. APPLIED TO FORESTRY'S PRODUCTIVE AGENTS
(See also the individual operation or type of output in III, IV, V)

A. Labor (Some material on labor will be found in IF, IV)

1. General, employment, demand
2. Supply, union
3. Wage, cost hours, productivity, technology, training, return, benefit
4. Working condition, turnover, absenteeism, safety, insurance
*5. Characteristics of the worker

B. Owner, ownership, manager, entrepreneuer, holding (See also IC, IIC3)

1. General
2. Public

*a. General
b. Federal, central
c. Regional, local

3. Private

a. General
*b. Industrial
c. Nonindustrial

C. Land

*1. Context of supply, requirement, etc.
2. Description, use trend and status, interpreted description
3. Management, use prospect and plan, planning, marketing, tenure

*4. Research method

D. Capital

1. General, investment, interest, finance
(For investment in forest production, see IIIE; for that in manufacturing, see IVA4)
*2. Credit

III. APPLIED TO FOREST PRODUCTION (See also IIB, C)

A. Production including nontimber commodities and services

1. General, supply, multipurpose management
2. Christmas trees, greens
3. Range and livestock
*4. Naval stores, maple product
5. Recreation

a. General
*b. Research
c. Decision making, planning, policy, law
d. Demand, consumer, market
e. Parks and wilderness areas
*f. Interpretation
g. Aesthetic values
h. Consumer activities such as driving, walking, camping, etc.
i. Valuation

6. Water, soil, watershed management, shelterbelts
7. Wildlife, hunting, fishing
8. Urban forestry

B. Production chiefly of timber

1. General, supply
*2. Soil, site, site improvement
3. Tree regeneration and improvement; plantation
4. Intermediate cutting, pruning, stand improvement
5. Harvest cutting, rotation, cutting cycle, stocking, regulation, allowable cut
(For harvesting treated as engineering, see IVB)

C. Roads, other forest-management transportation
(For transportation in harvesting, see IVB4; in manufacturing

and marketing, VD)

D. Damage and protection

1. From fire
*2. Prescribed burning
*3. From insects
4. From other agencies
(For water damage and soil erosion, see IIIA6)

E. Decision making, planning, investment, accounting, inventorying
(For investment in general, see IID1)

IV. APPLIED TO MANUFACTURING
(For material on forestry in general, including forest land resources, see IB)

A. The industry in general

1. Status and trend

a. General
b. United States, Canada
c. Other north-temperate nations
*d. South-temperate nations
e. Nations in lower latitudes

2. Directory
(Includes those covering specific branches of industry.)
*3. History
4. Decision making, planning, investment, accounting, inventorying
(For a specific branch of industry, see that branch, "Operation of firm"; for investment in general, see IID1)

B. Timber-harvesting industry
(Includes roundwood in general; for specific types, see IVC, "raw material." For harvesting as silviculture, see IIIB4, 5)

1. Status and trend
2. Operation of firm
3. Utilization of the stand or tree
(For utilization of a specific product, see the branch of industry in question.)

*a. General

b. Logging residue and its disposal

*4. Transportation (Skidding, yarding, loading, hauling to mill. For transportation in forest management, see IIIC; in manufacturing and marketing, see VD)

C. Wood-using industry

1. Lumber, allied product, pallet

a. Industry status and trend
*b. Production, consumption, stocks, other statistics (For sawtimber, see IB, IVB; for sawlogs, see IVC1d)
*c. Operation of firm
*d. Raw materal

2. Pulp, paper, board

a. Industry status and trend
b. Operation of firm
c. Raw material
*d. By-products

*3. Veneer, plywood, panel

*a. Industry status and trend
*b. Operation of firm
*c. Raw material

*4. Bark, chips other residue (See also IVB3 and the industry branch in question, "Operation of firm.")
5. Furniture
*6. Particleboard, hardboard, fibreboard, flakeboard
*7. Construction
8. Charcoal, fuelwood, other combustibles; energy
9. Other wood-using industry (including pole, piling, post, mine timber, railway tie)

D. Other forest industry

*1. Decorative product
*2. Naval stores
*3. Maple product
4. Other

V. APPLIED TO MARKETING, TRADE, DEMAND FOR FOREST OUTPUT

(For marketing and demand for productive agents, see II)

A. Consumption

1. General; history of consumption; consumption-production relationships
2. Consumption or production prospect, goal, requirement, prediction (For material on short-term requirement, see the industry in question in IV, "Industry status and trend.")
*3. Consumer demand and preference
(For material on specific forest resources, see also IIIA,B)

B. Market, marketing, trade, export, import

1. General
*2. Futures, hedging
3. Stumpage, roundwood
4. Lumber, plywood, composition board
5. Pulp, paper, paperboard

a. Product
b. Raw material

*6. Other wood products
*7. Christmas trees, greens
*8. Other type of output (See also IIC3)

C. Price, value

1. General
2. Stumpage, roundwood
3. Other type of output
*4. Price reporting

*D. Transportation (Includes transportation in manufacturing.)
(For transportation in forest management, see IIIC; in harvesting see IVB4)

SOCIAL SCIENCES IN FORESTRY

A Current Selected Bibliography

Issue 58

2170. 58 IA HEMMINGS E.F. "Forestry." Chapter in, Information Sources in Agriculture and Food Science. Edited by G.P. Lilley. Published by Butterworths, London, U.K. ISBN 0-408-10612-3. (1981), pages 440-476. Cited in Forestry Abstracts, Vol. 42, No. 12. Major reference works are listed under the main classificd aspects of forestry and under countries, including some periodicals.

2171. 58 IA POURTALES F. DE "People and the Selection Forest." J For Suisse Schweiz Z Forstwes, Vol 131, No. 12 (1980) In French. Pages 1055-1068. Cited in Bibliography of Agriculture, Vol. 46, No. 3.

2172. 58 IA YOUNG R.A. Introduction to Forest Science. John Wiley & Sons. ISBN 0-471-06438-6 (1982), 554 pages. Includes chapters on: development of forest policy in the U.S., multiple-use management of the forests, forestry at the national level, private nonindustrial forests, forest-recreation management, and the forest products economy.

2173. 58 IB1 NILSSON S. "Forests and Forest Industry in the World Bank's Calculation Model and Its Significance to a Region." Sveriges Skogsvårdsförbunds Tidskrift, Vol. 78, No. 4 In Swedish. Pages 55-76. Cited in Forestry Abstracts, Vol. 42, No. 10.

2174. 58 IB2 BICKERSTAFF A., WALLACE W.L., EVERT F. Growth of Forests in Canada, Part 2: A Quantitative Description of the Land Base and the Mean Annual Increment. Canadian Forestry Service Environment Canada, Information Report PI-X-1 (1981) In English with French summary. 136 pages. Data on per hectare productivity and its areal distribution are provided for 139 eco-political units formed by combining the ecologically defined Forest Regions and component Sections of Canada with its politically defined ten provinces and two territories. The following are tabulated for each unit: operability class, economic availability, areas of productive forest land, wildland, and improved land.

2175. 58 IB2 FIELD D.B. "Highlights of Maine's Timber Economy." Misc Rep Maine Life Sci Agric Exp Stn, No. 235 (1980), 26 pages. Cited in Bibliography of Agriculture, Vol. 46, No. 3.

2176. 58 IB2 ROMANOV G.N. "Forests of the United States of America." Lesn Khoz, No. 2 (1980) In Russian. Pages 73-74. Cited in Bibliography of Agriculture, Vol. 46, No. 3.

2177. 58 IB2 RUDIS V. A., JONES J. G. Oklahoma Forest Industries, 1978. USDA Forest Service Resource Bulletin SO-78 (1981), 10 pages. Surveys and analyzes total production of softwood and hardwood output by county in Oklahoma during 1978.

2178. 58 IB2 SHEFFIELD R.M. Forest Statistics for Southwest Georgia, 1981. USDA Forest Service Resource Bulletin SE-61 (1981), 28 pages. Since the fourth inventory of the forest resources of Southwest Georgia in 1971, the area of commercial forest land has declined by 9 percent. Commercial forests now occupy 47 percent of the land area. Nonindustrial private landowners hold 89 percent of the commercial forest land. Inventory of softwood and hardwood growing stock increased by 15 and 20 percent. Net annual growth of growing stock totaled 225 million cubic feet. Annual timber removals totaled 160 million cubic feet.

2179. 58 IB2 STIER J.C., VICK G.L. Wisconsin's Forest Economy, an Overview. Forest Resource Analyses No. 1. Dept. of Forestry, Univ. of Wisconsin-Madison. (1981), 23 pages. First in a series of analyses of Wisconsin's forest resources. Covers: land ownership, timber inventory, timber growth and harvest, timber processing sector, forest products industries, productivity and investment.

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2181. 58 IB2 THOMSON G.W. "Iowa's Diasappearing Woodlands." Iowa State Journal of Research, Vol. 55, No. 2 (1980), pages 127-140. Forest area has declined from 6,680,926 acres in 1932 to 1,561,300 acres in 1974. Forest Service data show a 34 percent reduction since 1954.

2182. 58 IB2 WIERZBICKI A. "Remarks on Forests in the USA." Sylwan, Vol. 124, No. 3 (1980) In Polish. Pages 45-57. Cited in Bibliography of Agriculture, Vol. 45, No. 9.

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2185. 58 IB3 ALPERS W. "Forests in Luneburg Heath." Allgemeine Forstzeitschrift, No. 11 (1980) In German. Pages 243-300. Cited in Forestry Abstracts, Vol. 43, No. 3. Special issue containing 26 papers covering history, forest growth conditions, private forests, forest planning, soil treatments, insect/fire damage and control, timber market, urban and spa forests, recreation, game, and nature protection.

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2188. 58 IB3 CHANG I.H. Forestry in Korea. Seoul, South Korea, Office of Forestry. (1980), 118 pages. Cited in Forestry Abstracts, Vol. 43, No. 3. Summary of the goals and accomplishments of the first and second 10-year forest plans (1973-1982 and 1978-88) including: reforestation projects, operation of forest nurseries, establishment of fuelwood stands in rural areas, resettlement projects to abolish shifting cultivation, forestry extension service, minor forest products, forest protection, recreation, education, policy, administration, and forest products trade and industry.

2189. 58 IB3 DAUTZENBERG N. "The French Forests." In, Special Issue: Timber and Forests. Économie et Finances Agricoles. F. Clerc, ed. (1981) In French. 79 pages. Cited in Forestry Abstracts, Vol. 43, No. 1. Development of both publicly and privately owned French forests is described with details of composition, area and productivity.

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Economic Community." Gozdar Vestn Slov J For, Vol. 38, No. 6 (1980) In Slovenian. Pages 278-283. Cited in Bibliography of Agriculture, Vol. 45, No. 10.

2192. 58 IB3 FARRON L. "The Forests and Trees of Chaux-de-Fonds (Switzerland)." J For Suisse Schweiz Z Forstwes, Vol. 131, No. 8 (1980) In French. Pages 727-738. Cited in Bibliography of Agriculture, Vol. 46, No. 3.

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2195. 58 IB3 GRACAN J. "Forestry in China." Sumar List, Vol. 104, No. 1/2 (1980) In Serbo-Croation (Roman). Pages 80-84. Cited in Bibliography of Agriculture, Vol. 45, No. 10.

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Univ, Vol. 37, No. 2 (1980) In Japanese. Pages 307-478. Cited in Bibliography of Agriculture, Vol. 46, No. 3.

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history, with special reference to Switzerland. Regional and stand forest history are distinguished from district history.

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2215. 58 IB3 "Forestry as a Cultural Challenge." Allgemeine Forstzeitschrift Munich, No. 1/2 (1982) In German with English summary. Pages 1-37. Seven papers concerning the cultural challenge of sustained forestry from the viewpoint of silviculture, planning, management, and opening forest roads.

2216. 58 IB3 "The Forests of Baden-Wuerttemberg." Allgemeine Forstzeitschrift, Stuttgart, No. 40 (1981) In German. Pages 1032-1059. Proposal of a state forestry program and the parliamentary discussion of forestry in Baden-Wuerttemburg.

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2219. 58 IB4 PANDOLFO CLARA The Brazilian Amazon and Its Potentials. Ministerio de Interior. SUDAM. (1979) In Portuguese. 74 pages. Natural resources potential, soils, minerals, water, forests.

2220. 58 IB4 Chile. Forestry Statistics 1979. Instituto Forestal. Division de Estudios Económicos Informe Tecnico, No. 79 (1980) In English and Spanish. 120 pages. Production and consumption logs, lumber. Forest industries capacity, imports-exports. Prices, forestry and the national economy. The forest resource, global economic indicators.

2221. 58 IB4 Chile. Forestry Statistics 1980. Corporacion Nacional Forestal e Instituto Forestal, Serie Informatica N-1 (1981) In English and Spanish. 74 pages. Wood production and consumption: logs, lumber, pulp and paper, other industries; the forest resource; imports-exports; transport and employment.

2222. 58 IB4 Chile. The Forestry Sector in the National Chilean Economy. Economic and Financial Survey. CONAF (1981), In Spanish. 40 pages. Summary of a sector study. Economic importance of the Chilean forestry sector.

2223. 58 IB4 Statistics of the Forests and Forest Industries of New Zealand to 1980. New Zealand Forest Service Information Series No. 33. Available from New Zealand Forest Service, Private Bag, Wellington, New Zealand. (1981), 95 pages. Statistics on New Zealand's forest resource, and the production, trade, andconsumption of forest products. Importance of the country's expanding exotic forest estate and its associated industries is featured. (From a review in Journal of Forestry 80:5.)

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2225. 58 IB5 BUONGIORNO JOSEPH, SVANQVIST NILS "A Seperable Goal - Programming Model of the Indonesian Forestry Sector." Forest Ecology and Management, Vol. 4. (1982) pages 67-78. Latest of three models designed to analyze long-term development plans of the forestry sector of Indonesia by determining the geographic pattern of forest exploitation, industrial processing and transportation which minimizes total costs.

2226. 58 IB5 CHRISTOPHERSEN K.A., WAHLGREN H.E., WHITMORE J.L., ZERBE J.I., LAUNDRIE J.F. "Response of International Donors to Forestry Problems in Developing Countries." Journal of Forestry, Vol. 80, No. 4 (1982), pages 235-254. Present rates of reforestation must increase by at least a factor of five if projected wood biomass requirements are to be met. Donor-sponsored funding for ongoing and proposed forestry projects is dominated by expansion of industrial capacity which is likely to contribute to deforestation rather than prevent it. For optimum project success, local residents must participate in the design and implementation of projects and must feel that some of their needs are being met by that participation.

2227. 58 IB5 FLORES RODAS M.A. "Forestry for Rural Development: a New Approach." In, International Symposium on Tropical Forests. Utilization and Conservation. Ecological, Sociopolitical and Economic Problems and Potentials. New Haven, Connecticut; Yale University, School of Forestry (1981), 11 pages. Cited in Forestry Abstracts, Vol. 42, No. 12. Discussion of strategies and policies.

2228. 58 IB5 FONTAINE R. "What Is Really Happening to Tropical Forests?" Ceres, Vol. 14, No. 2. (1981) Pages 15-19. Based on latest available inventories, this appraisal warns that policy and management measures do not match the magnitude of depletion.

2229. 58 IB5 GREGERSON H.M. "Environmental Constraints versus Economic Gains in Tropical Forestry." In, International Symposium on Tropical Forests. Utilization and Conservation. Ecological, Sociopolitical and Economic Problems and Potentials. New Haven, Connecticut; Yale University, School of Forestry (1981), 17 pages. Cited in Forestry Abstracts, Vol. 42, No. 12.

2230. 58 IB5 GRITZNER J. Environmental Degradation in Mauritania. Washington, DC: National Academy of Sciences Staff Report (1981), 102 pages.

2231. 58 IB5 KUCHLI C.J. "Forest Use and Forestry in Indonesia." J. For. Suisse Schweiz Z Forstwes, Vol. 131, No. 6. (1980) In German. Pages 539-551. Cited in Bibliography of Agriculture, Vol. 45, No. 9.

2232. 58 IB5 LUGO ARIEL E., SCHMIDT RALPH, BROWN SANDRA "Tropical Forests in the Caribbean." Ambio, Vol. 10, No. 6 (1981), pages 318-324. Natural perturbations of Caribbean forests occur at predictable intervals to which the forests are adapted, and in some cases have beneficial effects. In contrast, man-made disturbances take longer to heal and may be irreversible. Human disruption of forests is related to the intensity of human activity, which in turn is dependent on energy consumption and land use policies. Since the arrival of European settlers the Caribbean has been subjected to alternating periods of deforestation and reforestation, depending on social and economic conditions. Some alternatives for forest management are suggested.

2233. 58 IB5 MERGEN F. International Symposium on Tropical Forests Utilization and Conservation. Proceedings of an International Symposium held at Yale University School of Forestry and Environmental Studies, New Haven, Conn. 06504. (1981).

2234. 58 IB5 O'KEEFE T.G. "Forestry in West Africa." Forest Products Journal, Vol. 32, No. 3 (1982), pages 8-9.

2235. 58 IB5 PAPÁNEK F. "Forests and Forestry in the People's Republic of Mozambique." Lesnícky Časopis, Vol. 27, No. 5 (1981) In Czech with English summary. Pages 399-407. Natural and man-made forests, their conservation and use, inventory methods, logging, forest industries and education. Foreign technical assistance is needed for development projects.

2236. 58 IB5 RAMACHANDRAN P.G. Forestry India 1981: A Historical and Current Sector Review. Report prepared for the Swedish International Development Authority (SIDA) New Delhi, India: OPTIMA (1981).

2237. 58 IB5 SANGAL P.M. "Scope and Implication of Agro-Forestry in India." The Indian Forester, Vol. 107, No. 5 (1981), pages 289-297.

2238. 58 IB5 SEBIRE R.A. "The Forests and Forest Industries of Sarawak." Aust For Ind J Aust Log, Vol. 46, No. 4 (1980), pages 45-46, 48-49. Cited in Bibliography of Agriculture, Vol. 45, No. 7.

2239. 58 IB5 SMITH M.G. "Forest and Forestry Programs in Tropical Countries." In, International Symposium on Tropical Forests. Utilization and Conservation. Ecological, Sociopolitical and Economic Problems and Potentials. New Haven, Connecticut; Yale University, School of Forestry (1931), 11 pages. Cited in Forestry Abstracts, Vol. 42, No. 12. Observations and comments on R.E. Evenson's paper, "Tropical Forests in Economic Development" and H.M. Gregersons's paper, "Environmental Constraints versus Economic Gains in Tropical Forestry."

2240. 58 IB5 SOWLES KENNETH MERVIN Forest Resources Utilization Needs in Lesser Developed Countries. Ph.D. Univ. of Idaho. (1980), 103 pages. Available through University Microfilms International.

2241. 58 IB5 SPEARS J.S. "Small Farmers - or the Tropical Forest Ecosystem?" In, International Symposium on Tropical Forests. Utilization and Conservation. Ecological, Sociopolitical and Economic Problems and Potentials. New Haven, Connecticut; Yale University, School of Forestry (1981), 34 pages. Cited in Forestry Abstracts, Vol. 42, No. 12. Review of sustainable land use systems for tropical forest areas. Discusses ways of encouraging small farmers to abandon shifting cultivation. Ten projects financed by the World Bank over the last decade are used as examples.

2242. 58 IB5 TAYLOR B.W. Short Analysis of Forest Resources Situation of Northeastern Nicaragua in 1980, with Special Reference to Development of Large Scale Forest Industries. Rome, FAO (1980) In Spanish. 51 pages. Cited in FAO Documentation Current Bibliography, Sept-Oct-81.

2243. 58 IB5 WINTERBOTTOM R.T. Reforestation in the Sahel: Problems and Strategies. Paper presented at the African Studies Association Annual Meeting, Philadelphia (1980), 32 pages. Analysis of the problems of deforestation and a review of the results of forestry projects in Upper Volta.

2244. 58 IB5 ZERBE J.I., WHITMORE J.L., WAHLGREN H.E., LAUNDRIE J.F., CHRISTOPHERSEN K.A. Forestry Activities and Deforestation Problems in Developing Countries. Washington, D.C., U.S. Govt. Printing Office. Order No. PASA No. A6/TAB-1080-10-78. (1980), 115 pages. Cited in Forestry Abstracts, Vol. 43, No. 3. Covers recently completed, current, and proposed forestry projects in developing countries; ecological effects of these activities, constraints in implementation of projects, and examples of success and failure.

2245. 58 IB5 Forestry Sector Analysis and Recommendations: Niger. Ouagadougou, Upper Volta: CILSS. Vol. 1 - Report, Vol. 2 - Annexes, Vol. 3 - Legal Texts. (1981), In French. 138 pages, 178 pages, 102 pages.

2246. 58 IB5 Forests and Forestry in the Sahel: the Gambia - a Case Study. Ouagadougou, Upper Volta: CILSS Vol. 1 - Report, Vol. 2 - Supporting Documentation (1981), 74 pages and 184 pages.

2247. 58 IC BEHAN R.W. "RPA/NFMA - Time to Punt." Journal of Forestry, Vol. 79, No. 12 (1981), pages 802-805. Attempting to resolve conflicts in management of the national forests, Congress enacted the Resources Planning Act and the National Forest Management Act, which now mandate planning for the National Forest System. The two acts should be repealed. Planning could then proceed as an administrative procedure, at far lower cost, and the agency could reestablish emphasis on its development, management, and protection activities.

2248. 58 IC BEIGIE CARL E., HERO ALFRED O. JR. Natural Resources in U.S. - Canadian Relations. Volume 2: Patterns and Trends in Resource Supplies and Policies. Westview Press, Boulder, Colorado (1980), 544 pages. Detailed information about the reserves, production, and uses of eight key minerals and a case study of one major replenishable commodity, forest products. Contributors explore contentious policy issues. Specific examples of bilateral cooperation, as well as conflict, provide useful background.

2249. 58 IC BERGER RICARDO The Brazilian Fiscal Incentive Act's Influence on Reforestation Activity in Sao Paulo State. Ph.D. Michigan State Univ. (1980), 91 pages. Available through University Microfilms International.

2250. 58 IC BREWER G.D. "The State's Responsibilites for the Protection and Preservation of Forestry Resources." In, International Symposium on Tropical Forests. Utilization and Conservation. Ecological, Sociopolitical and Economic Problems and Potentials. New Haven, Connecticut; Yale University, School of Forestry (1981), 5 pages. Cited in Forestry Abstracts, Vol. 42, No. 12.

2251. 58 IC CLERC F. "The State and Forestry." In, Special Issue: Timber and Forests. Economie et Finances Agricoles. F. Clerc, ed. (1981) In French. Cited in Forestry Abstracts, Vol. 43, No. 1.

2252. 58 IC COATS ROBERT N., MILLER TAYLOR O. "Developing Best Management Practices for California Forests." Journal of

Soil and Water Conservation, Vol. 36, No. 4 (1981), pages 205-208. Section 208 requires that states prepare areawide management plans to reduce the water quality degradation associated with agriculture and forestry. In California, the planning process for forestry, although behind schedule, shows considerable promise for producing significant changes in the process and content of forest practices regulation. This is because (a) the 208 process has provided a vehicle for pre-existing efforts to improve forest practices on private land in California and (b) both the California Department of Forestry and the State Board of Forestry are presently functioning under leaderships that are strongly committed to water quality protection as well as production forestry.

2253. 58 IC DAVALOS J.T. "The Impact of Natural Resource Management Policies on Forest Resources." In, Social and Environmental Consequences of Natural Resources Policies. USDA Forest Service General Technical Report RM-88 (1981), pages 10-16.

2254. 58 IC FFOLLIOTT P.F. "Integration of Wildlife and Other Natural Resources Policies." In, Social and Environmental Consequences of Natural Resources Policies. USDA Forest Service General Technical Report RM-88 (1981), pages 24-25.

2255. 58 IC FFOLLIOTT PETER F., HALFFTER GONZALO Social and Environmental Consequences of Natural Resources Policies, with Special Emphasis on Biosphere Reserves. USDA Forest Service General Technical Report RM-88. (1981). 57 pages. Proceedings of an international seminar, April 8-13, 1980. Durango, Mexico. Objective was to promote international cooperation among natural resources policy makers, scientists, and educators within the framework of the international Man and the Biosphere program. Contains 20 invited and volunteer papers, plus a summary of visits to La Michilia and Mapimi Biosphere Reserves.

2256. 58 IC GILTMIER JAMES W. "In Response to 'RPA/NFMA - Time to Punt.'" Journal of Forestry, Vol. 79, No. 12 (1981), pages 806-807, 810. In criticizing the Resources Planning Act (RPA) and the National Forest Management Act, Behan (Journal of Forestry 79:802-05) errs in thinking that repeal would reduce litigation over use of national forestlands and in holding that major controversies can be solved largely by local land managers. On the contrary, the legislation is beneficial. The planning it mandates, though costly, is helping national forest personnel to improve their management, and the data generated will increasingly provide a rational basis for deciding issues.

2257. 58 IC HASEL KARL, ZUNDEL R. "Forest Legislation in the Federal Republic of Germany - a Survey after the Settlement of Amendments." Forstwissenschaftliche Forschungen No. 37, Verlag Paul Parey, Hamburg and Berlin (1981) In German 63 pages. Describes and compares the different amendments in forest legislation of German states as affected by the 1975 federal forestry law.

2258. 58 IC JOHNSON W.W. "Milestones Leading to Forestry's Greatest Challenge." Pa For, Vol. 70, No. 4 (1980) Pages 6-7, 26. Cited in Bibliography of Agriculture, Vol. 45, No. 11-12. Environmental management, legislation of forest uses.

2259. 58 IC JUGLART M.DE "Legal Power over French Forests. Part 1." Comptes Rendus des Séances de l'Academie d'Agriculture de France, Vol. 67, No. 4 (1981) In French. Pages 293-299. Cited in Forestry Abstracts, Vol. 43, No. 1.

2260. 58 IC LINDELL RICHARD THOMAS The RARE-II Effort in Texas with Emphasis on the Proposed Four-Notch Wilderness Area on the Sam Houston National Forest. M.S.F. Stephen F. Austin State Univ. (1980), 100 pages. Available through University Microfilms International.

2261. 58 IC PLUMMER CATHERINE PHILLIPS "The Obligation to Reforest Private Land under the Washington Forest Practices Act." Washington Law Review, Vol. 56, No. 4 (1981), pages 717-742. The Washington Forest Practices Act requires successful reforestation of land after logging. The Act places the obligation to reforest on the landowner who is in actual control of the forest land. Subsequent landowners acquire forest land burdened with that obligation, and are required to reforest even if they have no actual notice of the requirement. The Act should be reformed to improve the notice given to purchasers of land of the obligation to reforest.

2262. 58 IC POPKIN A.B. "State Responsibility for Protection and Preservation of Forestry Resources." In, International Symposium on Tropical Forests. Utilization and Conservation. Ecological, Sociopolitical and Economic Problems and Potentials. New Haven, Connecticut; Yale University, School of Forestry (1981), 8 pages. Cited in Forestry Abstracts, Vol. 42, No. 12. Discussion of deforestation, general international legal norms, specific international policies and decisions, and policy alternatives.

2263. 58 IC RANDALL A. Resource Economics, An Economic Approach to Natural Resource and Environmental Policy. Grid Publishing, Inc., Columbus, Ohio. (1981), 415 pages.

2264. 58 IC RAPHAEL RAY Tree Talk: The People and Politics of Timber. Island Press, Covelo, California 95428. (1981) 287 pages.

2265. 58 IC RÜSCH W. "Are (Swiss) Forest Management Regulations Still Suitable?" Schweizerische Zeitschrift für Forstwesen, Vol. 131, No. 10 (1980) In German with French abstract. Pages 869-886. Cited in Forestry Abstracts, Vol. 43, No. 1. Review of the legal basis for forest-management regulation in Switzerland (on National and Canton levels), with guidelines for amendments.

2266. 58 IC SHANDS W.E. "A Citizen's Guide to the Forest and Rangeland Renewable Resources Planning Act." U.S. Forest Service in Cooperation with the Conservation Foundation. (1981) 47 pages.

2267. 58 IC SNIDER G.B., AYER H.W. "Determining Local Employment, Distribution, and Tax Revenue Effects of Changes in Forest and Range Policies." Journal of Forestry, Vol. 80, No. 4 (1982), pages 226-229. Policies studied are those which decrease allowable timber cut by 10 percent, decrease animal units on the forest by 20 percent, and increase forest-related tourism by 10 percent in two trade areas of Arizona. The policies have a combined effect which only marginally changes employment in each area. Timber and range policies are regressive with respect to income distribution, and tourism policy is progressive.

2268. 58 IC STAIRS G.R. "Impacts of Policies on Specific Renewable Natural Resources: Forest Resources." In, Social and Environmental Consequences of Natural Resources Policies. USDA Forest Service General Technical Report RM-88 (1981), 57 pages.

2269. 58 IC VOLLMER U. "The Forest as a Factor of Land Use in Bolivia." Revista Forestal Latinoamericana, No. 01/81 (1981) In Spanish with English and French summaries. Pages 55-77. Rational use of forests and forest land requires solutions in three areas: determination of potential uses of forest lands, formulation of land-use policies, and effective implementation of those policies and corresponding operational programs. This article deals with actual use of forest resources in Bolivia; describes some of the principal problems and the economic and ecological consequences resulting from the incorporation of forest and forest lands to productive use for forestry, agricultural or colonization purposes. Provisions of the Bolivia Forestry Law of 1974 and its implementation rules conceived to correct the existing deficiencies are presented.

2270. 58 IC (Motion) Forestry. UK, House of Lords. Official Report (Hansard) House of Lords Parliamentary Debates 417 (40). (1981), Pages 895-968. Cited in Forestry Abstracts, Vol. 42, No. 8. Text of a debate on 23 Feb. 1981 on 2 motions: to take note of the Report of the Select Committee on Science and Technology; and to call attention to the Government's statement on forestry policy of 10 Dec., 1980 with its emphasis on the expansion of forestry on the basis of the continuing partnership between the public and private sectors. The debate expressed confidence in the Forestry Commission and showed concern over proposed sales of Commission land, as well as problems of pests and of timber marketing.

2271. 58 IC Forest Policy Strategy for the Amazonian Brazilian Region. Acta Amazonia, Vol. 9, No. 4 Supplement (1979) In Portuguese. 216 pages. Forest and climate, soils, water resources, ecology, forest inventories, wildlife conservation, fisheries, forest management, harvesting, chemistry, energy, anthropology and social aspects, issues and policies.

2272. 58 IC Forestry Resources Development Assistance: a Selective Bibliography of Reports. USAID Office of Development Information and Utilization, US Agency for International Development, Washington. (1980), 68 pages. Bibliography covering 58 reports with abstracts. Divided into: General works, US Govt. Policies and Programs, and Technical and Geographical Reports.

2273. 58 IC National Program for Forestry Development. Mexico. Subsecretaria Forestal y de la Fauna. Programa Nacional de Desarrollo Forestal (1980), In Spanish. 3 vols.

2274. 58 IC New Means of Analysis Required for Policy Decision Affecting Private Forestry Sector. Report No. EMD-81-18. Washington D.C.: US General Accounting Office. (1981).

2275. 58 IC Second Report, Select Committee on Science and Technology. Scientific Aspects of Forestry Vol. I - Report; Vol. II- Minutes of Evidence. London, UK; Her Majesty's Stationery Office. House of Lords Paper, Session 1979-80, No. 381 (1980), 59 pages; iv + 394 pages. Cited in Forestry Abstracts, Vol. 42, No. 8. Evidence was received from 56 individual or corporate witnesses with an interest in forestry research. Summaries are given under the headings of: relevant research knowledge and needs; organization and funding of research; and policies for forestry and rural land use. Recommendations are made on : greater integration of forestry with other land uses,

and the resolution of the economic problems involved; more appropriate management of ancient woodlands; greater diversification of stands; increased research on forest products; changes in the organization and funding of research; and some changes in the management objectives of the Forestry Commission in accordance with these recommendations.

2276. 58 ID1A BÅNGMAN G., LÖFGREN K-G, WIBERG A. "Forest Taxation and Its Impact on the Supply of Roundwood." Preliminary version. Stencil, Inst. for Skogsekonomie, SLU (1981) No pages given.

2277. 58 ID1A JAUFFRET-GUERIN H.M. "Taxation to Aid Forestry." In, Special Issue: Timber and Forests. Economie et Finances Agricoles. F. Clerc, ed. (1981) In French. Cited in Forestry Abstracts, Vol. 43, No. 1.

2278. 58 ID1B FRAUENDORFER R. "Is Unit Value a Suitable Basis for Taxation?" Allgemeine Forstzeitung, Vol. 92, No. 5 (1981) In German. Pages 324-327. Cited in Forestry Abstracts, Vol. 43, No. 2. Examination of relationships among forest unit valuations (used to set tax rates), net profits, and taxation of Austrian forests for the years 1956-1978. Because of oscillations in net profit (affected by changing market value for timber), the liquidity of forestry undertakings is impaired by high property/estate taxes.

2279. 58 ID1B HAGLER R. "How Tax Laws Affect Forest Yields." Pulp and Paper International, Vol. 24, No. 1 (1982), pages 59-62. Comparison of Finnish and US forest tax systems. Finns tax potential income of forest land.

2280. 58 ID1C COGGANS T.P., KELLER A. "Current Use Valuation: Opportunities and Restrictions for Estate Planning." Trusts and Estates, Vol. 119, No. 11 (1980), pages 41-47. Provisions of Section 2032A permit an executor to value certain real property used in a closely held business or on a farm at its current use, even though this may not be equal to the fair market value of the property. With planning and record keeping Section 2032A can significantly reduce estate taxes.

2281. 58 ID1C CONDRELL W. K., NEIDICH G. "ERTA '81: Substantial Tax Relief for Timberland Owners" American Forests, Vol. 88, No. 2. (1982) Pages 13, 58-60. The Economic Recovery Tax Act of 1981, described as the most far-reaching amendments to the Internal Revenue code since the first tax act, has some special attractions for the forestland owner.

2282. 58 ID1C HOOVER W.L. "Reforestation Tax Credit and Amortization." In, Proceedings of the Seventh Forest Owners and Users Conference. Illinois Cooperative Extension Service. (1981), pages 34-38.

2283. 58 ID1C MCCOBB J.E. "Clearer Timber Valuation Standards for Section 631 Purposes Emerge from Late Cases." The Journal of Taxation, Vol. 53, No. 3 (1980), pages 178-180. Only recently have judges begun to address the complex valuation questions facing the timber industry. This article analyzes the current status of factors such as comparables or the conversion return method and suggests planning considerations.

2284. 58 ID1C SIEGEL W.C. "The Impact of Taxation on Private Forest Ownership." In, Proceedings of a Conference on Timber Supply: Issues and Options. Proceedings No. P-79-24. Madison, Wisconsin: Forest Products Research Society. (1981), pages 176-182.

2285. 58 ID1C STIER J.C. Income and Estate Taxation of Forestry Enterprises. Public Administration Series: Bibliography No. P-816. Available from Vance Bibliographies, PO Box 229, Monticello, IL 61856. (1981), 12 pages.

2286. 58 ID2 FARNWORTH E.G., TIDRICK T.H., JORDAN C.F., SMATHERS W.M. "The Value of Natural Ecosystems: An Economic and Ecological Framework." Environmental Conservation, Vol. 8, No. 4 (1981), pages 275-282. Examples of market and non-market values of tropical moist forests demonstrate the range of non-market goods and services provided by natural ecosystems. These non-market values need to be incorporated in decisions about the fate of natural systems.

2287. 58 ID4 MAHRER F. "Seminar Forests and Society - Second Meeting at the Lenzburg Castle." Schweizerische Zeitschrift fuer Forstwesen, Zuerich, No. 9 (1981) In German Pages 715-731. Report from a round of talks discussing 55 theses about the relations of society to woods and forestry as stated by A. Speich.

2288. 58 ID4 SONNENFELD JEFFREY ALAN Corporate Views of the Public Interest: Perceptions of the Forest Products Industry. D.B.A. Harvard Univ. (1981), 404 pages. Available through University Microfilms International.

2289. 58 ID4 THRUPP ANN "The Peasant View of Conservation." Ceres, Vol. 14, No. 4 (1981), pages 31-34. A Costa Rican study suggests that campesenos are well aware of forest degradation; they lack only the means and incentives for action.

2290. 58 ID4 The Tree in Tropical Africa: Function and Sign. Entire issue of Cahiers ORSTOM/Serie Sciences Humaines, Vol. 17, No. 3-4 (1980) In French. Series of articles on the role of trees in a variety of African societies.

2291. 58 ID6 FAZIO J. R. Public Relations and Communications for Natural Resource Managers. Kendall/Hunt Publishing Co. (1981), 400 pages. Text and general reference on concepts and techniques of public relations applied to natural resources.

2292. 58 ID6 REEVES H.C., BEARD E.R., REEVES J.B. "Forestry Knowledge and Attitudes of Texas Sierra Club Members." Tex J Sci, Vol. 32, No. 3 (1980), Pages 269-277. Cited in Bibliography of Agriculture, Vol. 46, No. 1-2.

2293. 58 ID6 SHINGI P.M., WADWALKAR S. Peoples' Participation in Social Forestry - Some Propositions. Ahmedabad, India: Indian Institute of Management. Working Paper No. 364. (1981), 38 pages.

2294. 58 ID6 "The Field of Tensions between Forestry Management and Natural Protection." Schweizerische Zeitschrift fuer Forstwesen, Zuerich, No. 1 (1982) In German and French. Pages 1-85. Foresters have always defended landscapes and natural protection. Economics and practical management measures have caused problems with the public in recent years.

2295. 58 IE BÅNGMAN G., WIBERG A. "The Choice of Strategy for Forestry." Literature Study No. 1, Inst. for Skogsekonomie, SLU (1980) No pages given. An inventory of methods and results from research already done, to identify vaguely examined fields in forestry as a subject of research.

2296. 58 IE CALLAHAM R.Z. "Hawaii's Renewable Resources Research Plan for the 80's." In Hawaii Forestry Wildlife Conference-Moving Forestry and Wildlife into the 80's. USDA Forest Service, Pacific Southwest Region, State and Private Forestry: Distributed by the Institute of Pacific Islands Forestry. (1981) Pages 6a-6c.

2297. 58 IE CALLAHAM ROBERT Z. Criteria for Deciding about Forestry Research Programs. USDA Forest Service General Technical Report WO-29 (1981), 52 pages. In 1979, the Forest Service, USDA, was required to decide several significant issues affecting its future research program in response to requirements of the Forest and Rangeland Renewable Resources Planning Act of 1974. The decisions required information that was not either available or assembled and the criteria upon which the decisions should

be based had to be defined. Four criteria evolved: (1) Response to needs, primarily national, regional or special needs for which technology is inadequate, for emergency problems, and for the public's well-being; (2) contribution to productivity and other returns, including both quantifiable and nonquantifiable benefits; (3) response to national policies, particularly those enunciated by the executive and legislative branches of the federal government; (4) relation to historical trends, reflecting recognition that the course of research should not change drastically and should relate to changes in demand for technology. All indications are that substantially more public funds should be committed to research on renewable natural resources and that returns on investments will be justifiably high.

2298. 58 IE IACOB T. "Development of Forest Research in the Retezat Mountains (Romania)." Rev Padurilor Ind Lemnului Celul Hirtie Silvic Exploatarea Podurilor, Vol, 95, No. 3 (1980) In Rumanian. Pages 171-175. Cited in Bibliography of Agriculture, Vol. 46, No. 1-2.

2299. 58 IE MALMBORG G. "Forestry Research Projects for the 1980s. IV Forest Economics." Kungl. Skogs- och Lantbruksakademiens Tidskrift, Vol. 120, No. 1/2 (1981) In Swedish with English summary. Pages 75-85. Cited in Forestry Abstracts, Vol. 42, No. 10.

2300. 58 IE PETERSON R. MAX "The World's Forests Tomorrow: Will We Be Ready." Journal of Forestry, Vol. 80, No. 1 (1982), pages 30-31. With demands on forests rapidly increasing, research is vital to help forest managers improve productivity, understand human as well as biological effects of forest development, and anticipate future demands on the resource. Research programs must be backed by good dissemination systems, and international cooperation is essential.

2301. 58 IE PRODAN M. "Do the Forest Sciences Need a New Basic Concept?" Forstarchiv, Hannover, No. 4 (1981) In German with English and French summaries. Forestry should be concerned with the social sciences as well as the natural sciences.

2302. 58 IE SEGEBADEN G. VON "Forestry Research Prospects for the 1980s I." Kungl. Skogs- och Lantbruksakademiens Tidskrift, Vol. 120, No. 1/2 (1981) In Swedish with English summary. Pages 61-64. Cited in Forestry Abstracts, Vol. 43, No. 1. Main constraints on forestry research in Sweden will be financial. In fiscal year 79-80 less than one half percent of the value of annual fellings exported was spent on research and development.

2303. 58 IE SPEER J. "International Cooperation in Forestry Research." Forstwissen - schaftliches Centralblatt, Hamburg and Berlin, No. 6 (1981) In German with English summary. Pages 354-363. Key address at the 17th IUFRO World Congress, Kyoto, Japan. Forestry activities should be aimed toward an economical, biological, and social synthesis.

2304. 58 IF CONTRERAS SALAS M. Post-graduate Education Requirements in Latin America. Rome, FAO (1980) In English, Spanish and French. 6 pages. Cited in FAO Documentation Current Bibliography, Sept-Oct-81.

2305. 58 IF COUFAL JAMES E. "Forest Technician School Enrollment and Employment of Graduates, 1980-19 81." Journal of Forestry, Vol. 80, No. 2. (1982). Pages 94-96. Survey of 75 two-year forest technician schools in 28 states revealed: total enrollment was 4,200 to 5,000 students, with 1,450 to 1,750 graduates expected in 1981; 71 percent of 1980 graduates found jobs in forest technology by early 1981, 8 percent had other employment; main employer was industry but they took a smaller percentage of graduates than in 1978, 79, and 80; starting salaries averaged higher than in 1979.

2306. 58 IF DE LAS SALAS G. "Comments on the Need for Training Forestry Research Professionals in the Tropics." Revista Forestal Latinoamericana, no. 01/81 (1981) in Spanish with English and French summaries. Pages 99-107. Comment on the traditional educational systems in Latin-American schools and universities, and the need for improving professional disciplines in forestry and related sciences in the tropics. Outline of a new approach for training forestry professionals in the tropics is presented and comments are made on the lack of encouragement to researchers working for government agencies.

2307. 58 IF HEINRICHS J. "The Federal Job Market." Journal of Forestry, Vol. 80, No. 5 (1982), pages 281-284. Few foresters are being hired. Even fewer are coming through the employment register.

2308. 58 IF LAMB FRED MICHAEL The Linkages of Continuing Education to the Formation of Forestry Policy in Virginia. D.Ed. Pennsylvania State Univ. (1980), 145 pages. Available through University Microfilms International.

2309. 58 IF LANTICAN D.M., CASTILLO R.A. DEL Post-graduate Education in Forestry in Southeast Asia. Rome, FAO (1980) In English, Spanish and French. 6 pages. Cited in FAO Documentation Current Bibliography, Sept-Oct-81.

2310. 58 IF LOSITSKII K.B. "Improving Terminology in Forestry." Lesnoe Khozyaistvo, No. 8 (1980). In Russian. Pages 61-64. Cited in Forestry Abstracts, Vol. 42, No. 9. Review of recent official work in USSR to improve and standardize forestry terminology.

2311. 58 IF MUNRO D. "Not Enough Professional Foresters." J Logging, Vol. 11, No. 3 (1980) Pages 2391, 2411. Cited in Bibliography of Agriculture, Vol. 45, No. 11-12. Forestry education problems in British Columbia.

2312. 58 IF NEFF JEFFREY W. "Forestry Curricula: The Missing International Perspective." Journal of Forestry, Vol. 80, No. 1 (1982), pages 12-13. A survey of the catalogs of 41 U.S. forestry schools revealed that few included curricula with an international perspective. The dearth of international courses may have serious implications for world forestry, and schools should reevaluate their curricula.

2313. 58 IF NEVOLIN O.A. "The First Russian Forest Management Instruction and Its Significance." Lesnoĭ Zhurnal, No. 6 (1980) In Russian. Pages 120-122. Cited in Forestry Abstracts Vol. 43, No. 2. Historical significance of the first official Russian instruction on forest management, issued in 1830, entitled, "Instruction on management by the forest department in the montane areas of the Urals range, according to the rules of forest science and good husbandry."

2314. 58 IF NYYSSONEN A. Post-graduate Forestry Education in Europe, with Special Emphasis on the Needs of Developing Countries. Rome, FAO (1980) In English, Spanish and French. 7 pages. Cited in FAO Documentation Current Bibliography, Sept-Oct-81.

2315. 58 IF POURTALES F. DE "The Dangers of Specialization (Forestry)." J For Suisse Schweiz, Vol. 131, No. 4 (1980) In French. Page 345. Cited in Bibliography of Agriculture, Vol. 45, No. 8.

2316. 58 IF ROCHE L. Post-graduate Education in Forestry and Forest Resources in Africa. Rome, FAO Forestry Dept. (1980) In English, Spanish and French. 14 pages. Cited in FAO Documentation Current Bibliography, Sept-Oct-81.

2317. 58 IF SAGL W. "Study of Forest Science at Universitaet fuer Bodenkultur in Vienna." Centralblatt fuer das gesamte Forstwesen, Vienna, No. 4 (1981) In German. Pages 242-255. General problems with forestry education and proposals for changing the study programs.

2318. 58 IG FLORES-RODAS MARCO ANTONIO Towards a Forestry Strategy for Devlopment in Latin America. Ph.D. Univ. of

Washington (1980), 179 pages. Available through University Microfilms International.

2319. 58 IG HOWE CHARLES W. (Editor) Managing Renewable Natural Resources in Developing Countries. Westview Press, Boulder, Colorado (1981), 212 pages. Major issues in the four main renewable resource sectors - fisheries, forestry, agriculture, and water - with emphasis on the problems and benefits attendant to various use patterns and management practices. Authors are: James Critchfield, Marion Clawson, Roger A. Sedjo, D. Gale Johnson, C. W. Howe, and Ronald G. Cummings.

2320. 58 IG LOBOVIKOV T.S. "A Forest as an Economic Phenomenon." Lesnictvi, Vol. 27, No. 12 (1981) In Czech with Russian, English, German and French summaries. Pages 1033-1044.

2321. 58 IG SMITH B. "Forestry and Rural Social Change in N.Z." Town Planning Quarterly, No. 63. (1981), pages 27-29. Some studies have been made of forestry villages and single industry pulp and paper towns but few attempts have been made to look at the social implications of forestry for existing communities. The social aspects of regional development in New Zealand warrant more research.

2322. 58 IG SMITH B. "Rural Change and Forestry." People and Planning, No. 20 (1981), pages 10-13. More effective use of the land resource, along with a reduction in the amount of conflict generated over competing access to land, will be achieved when land use planning places as much emphasis on categories of land tenure, ownership and control, as it has on the traditional classification of land suitability.

2323. 58 IG SMITH B.N.P. "Forestry and Rural Social Change: A Comment." New Zealand Journal of Forestry, Vol. 26, No. 1 (1981), pages 103-107. Growth predicted for the forestry sector over the next two decades will bring about considerable social change in various regions in New Zealand, particularly in major project areas. Problems are likely to arise where expansion and development are seen as threatening the quality of rural life, the assumed benefits to local employment and income do not eventuate, or local autonomy is undermined.

2324. 58 IG SOLBERG B. "Socio-Economic Perspectives on the Old Forest Problem." In: Gammelskogen - verdifull, men problemfylt. Landbruksforlaget, Oslo (1980) No pages given.

2325. 58 IG SPEARS J. "Designing Forestry Components for Inclusion in Agricultural and Rural Development Projects." In, Proceedings of the Agricultural Sector Symposium, January 7-11, 1980, Washington, D.C.; World Bank (1980), pages 309-326. Cited in Forestry Abstracts, Vol. 42, No. 12. An integrated approach is important. Key questions to be considered during project preparation and appraisal and possible direct outputs from forestry projects are included.

2326. 58 IG Role of Community Forestry in Rural Development in the Asia and Pacific Region. Asian Development Bank (1980), 16 pages. Community forestry: a development concept, framework for a community forestry project.

2327. 58 IH CONACHER A. "Environmental Legislation in Western Australia." Australian Geographical Studies, Vol. 18, No. 1 (1980), pages 51-61. Cited in Forestry Abstracts, Vol. 42, No. 9. Two specific examples of environmental issues in Western Australia are discussed. Inadequacies of the state's environmental legislation and the powerlessness of the federal government have negative implications for the future maintenance and improvement of environmental quality.

2328. 58 IH DEWEES P. A. "Fuelwood Use and Deforestation: Components of the Third World Energy Crisis." FOREM, Vol. 5, No. 1, published by School of Forestry and Environmental Studies, Duke University. (1981), pages 12-13,16.

2329. 58 IH ERNST W., HALL H., HALL S., MATHESON R., OSBORNE J., WILSON R. A Review of Environmental Impacts Associated with Particular Forestry Practices in Eastern Canada. Environment Canada, Briefs and Submissions Report EPS 7-AR-81-1 (1981), 101 pages.

2330. 58 IH EWEL J. "Environmental Implications of Tropical Forest Utilization." In, International Symposium on Tropical Forests. Utilization and Conservation. Ecological, Sociopolitical and Economic Problems and Potentials. New Haven, Connecticut; Yale University, School of Forestry (1981), 11 pages. Cited in Forestry Abstracts, Vol. 42, No. 12.

2331. 58 IH JACQUIOT C. "Forest Nature Reserves, an Important Part of Our Scientific Heritage." Comptes Rendus des Séances de l'Academie d'Agriculture de France, Vol. 67, No. 2 (1981) In French with English summary. Cited in Forestry Abstracts, Vol. 43, No. 2. Nature reserves of the forest of Fontainebleau, France, are climactic communities which ensure the conservation of species which are either rare or no longer present anywhere else.

2332. 58 IH SORAN V., TONIUC N. "Role of Forests in the Protection of the Human Environment." Rev Padurilor Ind Lemnului Celul Hirtie Silvic Exploatarea Padurilor, Vol. 95, No. 1 (1980) In Rumanian. Pages 57-58. Cited in Bibliography of Agriculture, Vol. 45, No. 10.

2333. 58 IH VAN HOOK R.I., JOHNSON D.W., WEST D.C.,MANN L.K. "Environmental Effects of Harvesting Forests for Energy" Forest Ecology and Management, Vol. 4, No. I (1982) Pages 79-94. New demands on wood for energy are effecting a trend toward (1) removing all woody biomass from harvested areas, (2) increasing the frequency of harvesting second growth forests, and (3) increasing production with biomass plantations; and may bring about a change in forest utilization policies.

2334. 58 IIA1 KALOUSEK F. "Vertical Mobility of the Technical and Administrative Staff in Enterprises of the State Forests." Lesnictvi, Vol. 27, No. 11 (1981) In Czech with Russian, English, German, and French summaries. Pages 973-981. Czech State forest workers were studied from 1949 to 1976 to determine requirements for advancement and demotion. Results will be applied to personnel management plans.

2335. 58 IIA1 LAVERGNE C. "Wood Cutters in Limousin." Foret Privee, May/June (1980) In French. Pages 80-89. Cited in Bibliography of Agriculture, Vol. 45, No. 7.

2336. 58 IIA1 ŠRUT G. "Horozontal Mobility of the Technical and Administrative Staff in Enterprises of the State Forests." Lesnictví, Vol. 27, No. 11 (1981) In Czech with Russian, English, German, and French summaries. Pages 961-971. Working conditions and employee benefits, education and training in forest management in the State Forests of Czechoslavakia.

2337. 58 IIA2 KIKUMA M. "Local Use and Development Structure of Afforestation Labor Organization in the National Forest: Historical Analysis of Consigned Forest System (in Japan)." Hokkaido Daigaku Nogaku-bu Enshurin Kenkyu Hokoku Res Bull Coll Exp For Hokkaido Univ, Vol. 37, No. 2 (1980) In Japanese. Pages 479-608. Cited in Bibliography of Agriculture, Vol. 46, No. 3.

2338. 58 IIA3 MANUEL D.W. "Developing Human Resources in the Forest Industry." Pulp and Paper Canada, Vol. 83, No. 1 (1982), pages 34, 37-38. Labor is rapidly becoming the largest cost item in production. Workers must be trained to use new technology efficiently.

2339. 58 IIA3 STOIANOV N. "Improvement of Wage Rate Conditions in Logging Industry." Gorsko Stopanstvo, Vol. 36, No. 9

(1980) In Bulgarian. Pages 33-37. Cited in Bibliography of Agriculture, Vol. 46, No. 3.

2340. 58 IIA4 MAKKONEN OLLI "Development of the Payment of Wages and Work Conditions in Forest Work in Finland Prior to the Age of Agreements on the Terms of Working." Silva Fennica, Vol. 15, No. 3 (1981) In Finnish with English summary. Pages 237-255.

2341. 58 IIA4 PETTERSSON B., AMINOFF S., GUSTAFSSON L., LINDSTRÖM K.G., SUNDSTRÖM-FRISK C. "Increased Safety in Forestry - a Program of Action." Meddelande, Forskningsstiflelsen Skogsarbeten, No. 14 (1981) In Swedish with English summary. 80 pages. Cited in Forestry Abstracts, Vol. 42, No. 10.

2342. 58 IIB1 ELLEFSON P.V., PALM S.L., LOTHNER D.C. "From Public Land to Nonindustrial Private Forest: a Minnesota Case Study." Journal of Forestry, Vol 80, No. 4 (1982), pages 219-234. Minnesota statute calls for return of 2.9 million acres of tax-forfeited land to private ownership. Study of one county's sales (130,000 acres in 18 years) indicates owners resemble other nonindustrial private forest owners around the nation. Findings raise questions about society's interest in transferring forestland from public to private ownership.

2343. 58 IIB2B BELL E.F., RANDALL R.M. "Opportunities to Increase National Forest Softwood Harvest." Journal of Forestry, Vol. 80, No. 3 (1982), pages 152-160. A review of national forest inventory, growth, access, markets, budgets, and policies indicates limited opportunities to increase timber harvest. Increase in harvest may enhance economic and social values, but produce detrimental environmental effects.

2344. 58 IIB2B GARCIA MARGOT YVONNE WEAVER Citizen Participation in Forest Service Planning in Arizona. Ph.D. The Univ. of Arizona (1980), 184 pages. Available through University Microfilms International.

2345. 58 IIB2B HAFNER F. "The Swedish State Forests: a Huge, Many-sided Forest Enterprise." Allgemeine Forstzeitung, Vol. 91, No. 7 (1980) In German. Pages 179, 181-184. Cited in Forestry Abstracts, Vol. 42, No. 9. Since 1969 the state forests, which do nearly all their own harvesting, have been reorganized. Subsidiary companies were set up to manage activities in mining, recreation, technical consulting, contract harvesting, forest machinery and sawmilling.

2346. 58 IIB2B HAIGH J.A., KRUTILLA J.V. "Clarifying Policy Directives: The Case of National Forest Management." Policy Anal, Vol. 6, No. 4 (1980) Pages 409-439. Cited

in Bibliography of Agriculture, Vol. 45, No. 11-12. Role of the U.S. Forest Service, legislation.

2347. 58 IIB2B IRLAND L.C. "Who Says You Can't Cut a Tree on Sites Growing 19 Cubic Feet?" Journal of Forestry, Vol. 80, No. 3 (1982), pages 158-159. Bell and Randall (Jour. of For. 80:152-156,160) give little reason for thinking that planning under the Resources Planning Act defines the place of individual national forests in the country's timber supply situation. The timber strategy is defined in terms of constraints which serve to limit the area that could be allocated to wilderness in the northeast.

2348. 58 IIB2B LE MASTER D.C. "Forest Service Funding under RPA." Journal of Forestry, Vol. 80, No. 3 (1982), pages 161-163. USDA Forest Service funding has increased since passage of the Resources Planning Act. Increases have been proportionally greater than those for the federal government and were spread unevenly among the bureau's major activities.

2349. 58 IIB2B MOGREN PAUL ANDREW The Development of a Philosophy of Land Reservation on General Land Office, United States Forest Service, and National Park Service Lands 1787 to 1947. Ph.D. The Univ. of Utah. (1980), 229 pages. Available through University Microfilms International.

2350. 58 IIB2B NEWPORT C.A. "A Foregone Conclusion about Timber Increases." Journal of Forestry, Vol. 80, No. 3 (1982), page 160. Increased timber output from the National Forest System is unlikely as long as goals under the Resources Planning Act are formulated by individual forests. Unless national objectives are established first, an individual forest is likely to plan only such timber production as it can easily achieve while fulfilling nontimber objectives.

2351. 58 IIB2B TEEGUARDEN D.E. "Rationalizing Policy Constraints on National Forest Timber Supply." Journal of Forestry, Vol. 80, No. 3 (1982), pages 157-158. Various policy factors constrain planning for timber from the National Forest System, but their actual effects are not known. Specific information might alter assumptions the planners now make about trade-offs between timber and other forest goods and services.

2352. 58 IIB2B WHISNANT MARY SUSAN The Management Climate for Implementation of New Processes for Resource Management Planning on the National Forests. Ph.D. Univ. of Georgia (1980), 222 pages. Available through University Microfilms International.

2353. 58 IIB2B "Bavarian State Forest Service - Annual Report 1979, Vol. 49." Bavarian State Department for Nutrition, Agriculture and Forestry, Forest Service, Munich (1981) In German 102 pages.

2354. 58 IIB2C SHAIKH A., LARSON P. The Economics of Village-Level Forestry: A Methodological Framework. Washington, DC: US Agency for International Development. (1981), 73 pages.

2355. 58 IIB3A BANDO T. "Some Typical Examples of the Development of Forest Owners' Associations in Hokkaido." Hokkaido Daigaku Nogaku-bu Enshurin Kenkyu Hokoku Res Bull Coll Exp For Hokkaido Univ, Vol. 37, No. 1 (1980) In Japanese. Pages 51-141. Cited in Bibliography of Agriculture, Vol. 46, No. 3.

2356. 58 IIB3A DOLAN A.G., RUSSEL B.P. Economic Survey of Private Forestry: England and Wales. Establishment Costs. Twenty-eighth Annual Report for Forest Year 1979. Oxford, UK. Commonwealth Forestry Institute. (1981), 74 pages. Cited in Forestry Abstracts, Vol. 42, No. 11.

2357. 58 IIB3A DOLAN A.G., RUSSEL B.P. Economic Survey of Private Forestry: England and Wales, Income and Expenditure. Twelfth Report for Forest Year 1978. Oxford, U.K. Commonwealth Forestry Institute (1981), 69 pages. Cited in Forestry Abstracts, Vol. 42, No. 9.

2358. 58 IIB3A HILBERT P. "Private Forestry Economics, an Example." Ugeskr Jordbrug, Vol. 125, No. 36. (1980) In Danish. Pages 847-853. Cited in Bibliography of Agriculture, Vol. 45, No. 10.

2359. 58 IIB3A HOGSGAARD O. "Private Forestry. An Activity Based on Ecology." Ugeskr Jordbrug, Vol. 125, No. 32. (1980) In Danish. Pages 743-749. Cited in Bibliography of Agriculture, Vol. 45, No. 7.

2360. 58 IIB3A RAVUSSIN H. "The Consolidation of Private Forest Land." Mensuration, Photogrammetrie, Génie Rural, No. 7/80 (1980) In French. Pages 301-304. Cited in Forestry Abstracts, Vol. 43, No. 2. Private forests in Switzerland are divided into small parcels, with declining production since World War 2. Owners should form a cooperative or make use of new legislation to consolidate holdings.

2361. 58 IIB3C CUMMING D.G. Farm Forestry in the Uplands and Hills. Farm Management Review No. 16, North of Scotland College of Agriculture, Agricultural Economics Division, School of Agriculture, 581 King Street, Aberdeen. (1982), 6 pages. Scottish hill and upland farmers

differ from their European counterparts by having few productive forest areas on their land. Labor and cost requirements for establishing farm forests and benefits in terms of income, shelter and wood production are examined.

2362. 58 IIB3C JONES J. G., THOMPSON R. P. Characteristics, Attitudes, and Objectives of Nonindustrial Private Forest Owners in Eastern Oklahoma. Oklahoma State University Research Report P-816. (1981), 32 pages.

2363. 58 IIB3C KURTZ W.B., CROUSE C.K. Nonindustrial Private Forest Ownership Studies: A Bibliography. CPL Bibliographies, 1313 E. 60th St., Chicago, IL 60637. (1981), 14 pages.

2364. 58 IIB3C LE RAY J. "Forests, Elements of Life in Rural Areas." Bull Tech Inf, Mar/Apr (1980) In French. Pages 227-231. Cited in Bibliography of Agriculture, Vol. 45, No. 7.

2365. 58 IIB3C MADEC J.H. "Forests and Woods in Farming." Bull Tech Inf, Mar./Apr. (1980) In French. Pages 185-193. Cited in Bibliography of Agriculture, Vol. 45, No. 7.

2366. 58 IIB3C MEEKS GORDON JR. "State Incentives for Nonindustrial Private Forestry." Journal of Forestry, Vol. 80, No. 1 (1982), pages 18-22. A survey in 1981 by the National Conference of State Legislatures found that tax legislation is the most extensive method used by states to encourage management of nonindustrial private forests. Approximately 22 states provide forest landowners and farmers with property tax relief by assessing value on the basis of use (rather than market value), and by providing various means of deferring timber taxes. Few states provide cost-sharing or other direct financial incentives other than through their technical assistance programs. The effectiveness of incentives programs was not quantified, but indications are that funding and institutional considerations are the primary limitations. Taxes have frequently been called the primary disincentives to nonindustrial management for timber production. The extensive actions on taxes implies a susbstantial interest by state legislators in lessening the obstacles to such management.

2367. 58 IIB3C MILITON J. "Forests as Possible Contributions for the Farmer in Auvergne." Bull Tech Inf. Mar/April (1980) In French. Pages 233-236. Cited in Bibliography of Agriculture, Vol. 45, No. 7.

2368. 58 IIB3C MONAGHAN T., PARKER R.C. "Forestry Terms for Mississippi Landowners." Publ Coop Ext Serv Miss State

Univ, June (1980), 12 pages. Cited in Bibliography of Agriculture, Vol. 45, No. 7.

2369. 58 IIB3C ROY C. "State Aids to Conversion." Foret Privee, May/June (1980) In French. Pages 29-32. Cited in Bibliography of Agriculture, Vol. 45, No. 7. Financial aid to forest operations in France.

2370. 58 IIB3C STAUFFER A. "Communal Forestry in Rwanda." Schweizerische Zeitschrift für Forstwesen, Vol. 131, No. 6. (1980) In French with German summary. Pages 487-510. Cited in Forestry Abstracts, Vol. 42, No. 10. Projet Pilote Forestiere includes afforestation and forest management projects integrated with the needs and social structure of the rural population. Project provides firewood and timber for construction and controls erosion.

2371. 58 IIB3C WHEATCRAFT A.M. Public Assistance Programs for Nonindustrial Private Forestry: An Annotated Bibliography. Staff Paper Series No. 26. Dept. of Forest Resources, Univ. of Minnesota. (1982), 35 pages.

2372. 58 IIC2 CAULFIELD S. "Forest Clearance and Land Use in Mayo around 3000 B.C." Irish Forestry, Vol. 38, No. 2 (1981), pages 92-100.

2373. 58 IIC2 CHARLTON AMELLE ANGELA A. Trabuco District, Cleveland National Forest: Public and Private Land Use Conflicts. M.A. California State Univ., Fullerton (1980), 137 pages. Available through University Microfilms International.

2374. 58 IIC2 HENDERSON KRIMHILDE TRESCHER Farm and Forest on the Dorrigo: A Historical-Ecological Study of Land Use Conflict in Northern New South Wales. Ph.D. Univ. of California, Berkeley (1980), 756 pages. Available through University Microfilms International.

2375. 58 IIC3 BARNEY RICHARD J., RUDOLPH TONI PATTERN -- A System for Land Management Planning. USDA Forest Service Research Note INT-318. (1981), 10 pages. Describes PATTERN (Planning Assistance Through Technical Evaluation of Relevance Numbers), a procedure for identifying and ranking key factors in land management decisions. Applies the technique to a hypothetical example.

2376. 58 IIC3 BROWN T. C. Tradeoff Analysis in Local Land Management Planning. USDA Forest Service General Technical Report RM-82. (1981), 12 pages. Concepts, procedures, and displays to facilitate land management planning at the local level. Emphasis is on tradeoffs (analysis) in the formulation of alternatives, estimation of the effects of the alternatives, and comparison of the alternatives.

2377. 58 IIC3 CERNEA M.M. Land Tenure Systems and Social Implications of Forestry Development Programs. Washington, DC: World Bank Staff Working Paper No. 452. (1981).

2378. 58 IIC3 CORDELL H.K., LEGG M.H., MCLELLAN R.W. "The Private Outdoor Recreation Estate." Chapter 2 in The Third Nationwide Outdoor Recreation Plan -- Appendix IV Private Sector Outdoor Recreation. U.S. Dept. Interior, Heritage Conserv. Recreat. Serv. Describes privately-owned land, water and open space resources, the private supply of developed sites and facilities; recreational lots and vacation homes; and the potential role of private lands.

2379. 58 IIC3 HYDE W. F. "Resolving Conflict over Public Resources Management." FOREM Vol. 5, No. 1, published by School of Forestry and Environmental Studies, Duke University. (1981), pages 4-9. Simpler approach to resource management problems using a clear agency-wide identification of quantifiable distributional objectives consistent with those set forth by Congress and public welfare agencies. Using these distributional objectives as constraints, resource managers and policy analysts proceed with a present net worth maximization of various alternative projects and project levels.

2380. 58 IIC3 LITTLE DENNIS L., DILS ROBERT E., GRAY JOHN Renewable Natural Resources a Management Handbook for the 1980s. Westview Press, Boulder, Colorado (1982), 316 pages. Present status of renewable energy resources in terms of opportunities and dangers, availability and possible expansion, how natural resources relate to human resources and needs, and replacement potential for nonrenewable resources such as fossil fuels. Domestic resources and needs are put into the context of international needs, supplies, and policies, emphasizing the issues facing an interdependent world and the urgent requirements of countries less endowed than the U.S.

2381. 58 IID1 DARGAVEL JOHN "Opportunities for Investment in Plantations in Tasmania 1. Opportunites for Whom?" Australian Forestry, Vol. 44, No. 2 (1981), pages 80-87. Although the biological and technical opportunities for growing plantations in Tasmania are excellent, their economic returns are poor. Few private owners have invested in plantations, but the State has established extensive areas. The State's forests and plantations are run at a loss as part of a long-standing policy of encouraging large industries with concessions and subsidized services. This policy has led to

substantial employment and the return of some economic benefits. However, Tasmania has little control over subsequent private investment decisions and the overall economic effects are regressive, benefitting most those with most.

2382. 58 IID1 GREIG P.J. "Opportunities for Investment in Plantations in Tasmania 2. Future Market Prospects for Tasmanian Forestry Investors." Australian Forestry, Vol. 44, No. 2 (1981), pages 88-97. Market success for sawlogs depends partly on the relative costs of converting them to sawn wood. Recent trends in state averages for those costs are compared for Victoria's main or potential suppliers - Tasmania, South Australia, New Zealand and Victoria itself. Results indicate that states basing their sawmilling industries on softwood plantations have less pronounced cost increases, and thus have better future marketing prospects. For eventual marketing success, private forestry investors should concentrate on softwood plantations or hardwood forests with equivalent utilization characteristics.

2383. 58 IID1 JONES J. G., MAZURKIEWICZ K. L., BROWN F. E. FINANCE: An Interactive Computer Program for Analyzing Long-term Forestry Investments. Dept. of Forestry, Oklahoma State University Research Report P-817 (1981), 44 pages. FINANCE, an interactive FORTRAN computer program calculates present net worth, internal rate of return, land expectation value, and annual equivalent for each investment alternative entered.

2384. 58 IID1 MILLS WALTER LAIN JR. Risk/Return Tradeoff among Forest and Nonforest Investments. Ph.D. Purdue Univ. (1980), 205 pages. Available through University Microfilms International.

2385. 58 IID1 MUTHOO MAHARAJ K. "Better Criteria for Forestry Investment." Ceres, Vol. 14, No. 4 (1981), pages 24-27. Forestry could make a significant contribution to development if the required resources are available for developing an efficient and competitive forest industry.

2386. 58 IID1 QUICK J.R. "Opportunites for Investment in Plantations in Tasmania 3. Sources of Funds for the Private Forestry Investor." Australian Forestry, Vol. 44, No. 2 (1981), pages 98-101. Potential sources of funds for the plantation investor in Tasmania, including assistance schemes developed by the recently created Private Forestry Division of the Tasmanian Forestry Commission, are outlined in relation to the categories of forest ownership: farm forestry, entrepreneurial forestry, industrial forestry and investment forestry.

2387. 58 IID1 WHEELER C.D. "The Risks and Rewards of Investments in Tropical Forests." In, International Symposium on Tropical Forests. Utilization and Conservation. Ecological, Sociopolitical and Economic Problems and Potentials. New Haven, Connecticut; Yale University, School of Forestry (1981), 10 pages. Cited in Forestry Abstracts, Vol. 42, No. 12.

2388. 58 IIIA1 BUDOWSKI G. "The Place of Agro-Forestry in Managing Tropical Forests." In, International Symposium on Tropical Forests. Utilization and Conservation. Ecological, Sociopolitical and Economic Problems and Potentials. New Haven, Connecticut; Yale University, School of Forestry (1981), 14 pages. Cited in Forestry Abstracts, Vol. 42, No. 12. Types of agro-forestry are examined, including multiple cropping and taungya systems.

2389. 58 IIIA1 FANDELI C. "Agro-Forestry, a Multi-Purpose Technology for Farm Forests." In, Experiences with Agroforestry on Java, Indonesia. Gadjah Mada Univ., Forestry Faculty, Bulaksumur, Yogyakarta, Indonesia. (1980) In Indonesian with English summary. Pages 76-97. Cited in Forestry Abstracts, Vol. 42, No. 11.

2390. 58 IIIA1 GRANDSTAFF TERRY B. "Shifting Cultivation." Ceres, Vol. 14, No. 4 (1981), pages 28-30. Research suggests that the agricultural needs of the shifting cultivators and the need for forest biomass, watershed, etc., are not necessarily in conflict. Shifting cultivators, rather than being the problem, may, through practical agro-forestry, help provide solutions.

2391. 58 IIIA1 HARUN A. "Intensification and Improvement of Forest Land Management to Provide for the Needs of People Living Near Forest Areas." In, Experiences with Agroforestry on Java, Indonesia. Gadjah Mada Univ., Forestry Faculty, Bulaksumur, Yogyakarta, Indonesia. (1980) In Indonesian with English summary. Pages 61-75. Cited in Forestry Abstracts, Vol. 42, No. 11. Suggestions include extending the agricultural cultivation period in taungya systems through the use of shade-tolerant crops, and planting improved fodder species in silvo-pastoral systems.

2392. 58 IIIA1 HOLMSGAARD E. "Forestry - Tree Production and Outdoor Life." Tidsskr Landokon, Vol. 167, No. 1 (1980) In Danish. Pages 33-38. Cited in Bibliography of Agriculture, Vol. 45, No. 11-12.

2393. 58 IIIA1 KARYONO "Traditional Agroforestry Systems in West Java." In, Experiences with Agroforestry on Java, Indonesia. Gadjah Mada Univ., Forestry Faculty, Bulaksumur, Yogyakarta, Indonesia. (1980) In

Indonesian with English summary. Pages 179-199. Cited in Forestry Abstracts, Vol. 42, No. 11.

2394. 58 IIIA1 LEISZ D.R. Multiple Use: Its Growth from General Concept to Working Tool." USDA Forest Serv. General Technical Report WO-25 (1980), pages 10-12. Cited in Bibliography of Agriculture, Vol. 46, No. 1-2.

2395. 58 IIIA1 MAYER HANNES "The Ten Ecological Commandments for Forests and Wildlife." Waldbau-Institut-Universitaet fuer Bodenkultur, Vienna (1981) In German 11 pages. Ten rules for silviculture and hunting management appropriate to nature, by a silviculturalist.

2396. 58 IIIA1 MÜHLMANN R. "Modern Multiple-Use Forest Management - Using Outmoded Silvicultural Practices?" Allgemeine Forstzeitung, Vol. 92, No. 2 (1981) In German. Page 49. Cited in Forestry Abstracts, Vol. 42, No. 8. Since 1957 a profitable spruce-fir selection forest at Kufstein, Austria has been managed using labor- and cost-reducing methods, including single-tree extraction and natural regeneration. It is suggested that these methods are applicable to large areas of Austrian forest.

2397. 58 IIIA1 OSTEEN C., CHAPPELLE D.E. "Forest Management Options and Policy Implications in the Kalamazoo River Basin of Michigan." Journal of Forestry, Vol. 80, No. 5 (1982), pages 287-290. Increases in timber sales and stand improvement would achieve significant timber and hunting benefits without increasing erosion. Government programs should be oriented towards improving markets before subsidizing management practices in this area.

2398. 58 IIIA1 SETH S.K. India and Sri Lanka - Agroforestry. Rome: FAO Forestry for Local Community Development Program (1981), 116 pages.

2399. 58 IIIA1 SOEKARTIKO B. "Experiences with Intensified Taungya on Forest Lands." In, Experiences with Agroforestry on Java, Indonesia. Gadjah Mada Univ., Forestry Faculty, Bulaksumur, Yogyakarta, Indonesia. (1980) In Indonesian with English summary. Pages 141-158. Cited in Forestry Abstracts, Vol. 42, No. 11.

2400. 58 IIIA1 TUPITSYA Y.Y., SINYAKEVICH I.M. "Promoting the Integrated Utilization of Forest Resources while Taking Environmental Protection into Account." Lesnoi Zhurnal, No. 3 (1980) In Russian. Pages 110-115. Cited in Forestry Abstracts, Vol. 42, No. 9. Review of policy and procedure in the USSR.

2401. 58 IIIA1 VILLA-SALAS A.B., MANON-GARIBAY A.C. Multiresources Management Research in Northern Sonora. USDA Forest Service General Technical Report WO-25

(1980), pages 20-26. Cited in Bibliography of Agriculture, Vol. 46, No. 1-2.

2402. 58 IIIA1 WIERSUM K.F. "Introduction to Agroforestry." In, Experiences with Agroforestry on Java, Indonesia. Gadjah Mada Univ., Forestry Faculty, Bulaksumur, Yogyakarta, Indonesia. (1980) Pages 12-48. Cited in Forestry Abstracts, Vol. 42, No. 11. Possible functions of trees in agricultural systems and the advantages and constraints of agroforestry from ecological, economic, social and political view points.

2403. 58 IIIA2 BOWLBY V.L. Christmas Tree Taxation Manual. Corvallis, Oregon: Pacific Gateway Press. (1981).

2404. 58 IIIA3 TORELL A., GARRETT J.R., CHING C.T.K. "The Economic Effects of Three Changes in Public Lands Grazing Policies." Journal of Range Management, Vol. 34, No. 5. (1981) Pages 373-376. Linear programming was used to analyze the impact of potential changes in federal policies (Bureau of Land Management and U.S. Forest Service proposed increasing fees). The amount of federal grazing used by ranches was found to be relatively unresponsive to grazing fee increases. However, allotment reductions and adjustments in the allowed season of use for federal grazing had a large impact on the quantity of beef supplied and the net income of the ranches studied.

2405. 58 IIIA5A KARAMERIS A. "Analysis and Prognosis of Recreational Demand in Forests as a Contribution of Forestry to Regional Planning." Forstliche Forschungsberichte Munich, publications of the Faculty of Forestry, Munich, No. 50 (1982) In German with English summary. 260 pages. Recreation areas have been chosen to develop and test new methods for deriving recreational demand.

2406. 58 IIIA5A PALASHEV I. "Forests of France and Recreation of the Population." Priroda (Sofiia), Vol. 29, No. 2 (1980) In Bulgarian. Pages 90-92. Cited in Bibliography of Agriculture, Vol. 46, No. 1-2.

2407. 58 IIIA5A STOILOV D., NOSHTEV V. "Some Requirements for the Establishment of Protected Natural Territories (forest recreation zones)." Gorsko Stopanstvo, Vol. 36, No. 6 (1980) In Bulgarian. Pages 45-49. Cited in Bibliography of Agriculture, Vol. 45, No. 7.

2408. 58 IIIA5C BUIST LEON J., HOOTS THOMAS A. "Recreation Opportunity Spectrum Approach to Resource Planning." Journal of Forestry, Vol. 80, No. 2 (1982) Pages 84-86 Recreation opportunity planning incorporates the concept of a Recreation Opportunity Spectrum (ROS) into a planning

system that combines relationships between natural resource settings, recreational activities, and the resulting recreationist experiences into six ROS classes of land and water areas. The USDA Forest Service and the USDI Bureau of Land Management have adopted recreation opportunity planning as part of their integrated land and resource management planning process.

2409. 58 IIIA5C EISENMAN E., WENSEL L.C., THOR E.C., STUART T.W. Economic Data for Wildland Planning and Management in the Western United States: A Source Guide. USDA Forest Service General Technical Report PSW-42 (1980), 125 pages. Data are categorized by six types of management activities: outdoor recreation and wilderness; wildlife and fish; range; timber; land and water; and minerals and energy. For each type of activity, data sources are identified as to costs; outputs and their monetary values; nonmonetary data and impacts; information for supply and demand analysis; and secondary and indirect effects.

2410. 58 IIIA5C LAPPING M.B. "Landscape Planning Policy in Vermont: An Overview." Landscape Planning, Vol. 8, No. 4 (1981), pages 349-361. Vermont has created a comprehensive landscape quality management policy that will maintain the unique attractiveness of rural Vermont and preserve and enhance a landscape which is basic to the recreational and tourist industry.

2411. 58 IIIA5C LEATHERBERRY EARL C., LIME DAVID W. Unstaffed Trail Registration Compliance in a Backcountry Recreation Area. USDA Forest Service Research Paper NC-214 (1981), 11 pages. Two registration approaches were evaluated: (1) self-issued voluntary registration form, and (2) self-issued mandatory registration form. Cites factors influencing registration compliance and gives implications for management.

2412. 58 IIIA5C LUCAS R.C. "Recreation Regulations - When Are They Needed?" Journal of Forestry, Vol. 80, No. 3 (1982), pages 148-151. Managers should establish regulations only when they are the best way to achieve important objectives. Decisions can be arrived at through a seven-step systematic analysis that focuses on problem identification, consideration of non-regulatory alternative approaches, and estimation of costs and benefits of potential management actions.

2413. 58 IIIA5C PHILLEY M. P., MCCOOL S. F. "Law Enforcement in the National Park System: Perceptions and Practices." Leisure Sciences, Vol. 4, No. 3 (1981), pages 355-371. Identifies factors associated with the presence of crime and deviant behavior in National Park Service administered areas and examines the relationship among the crime rate,

manager perceptions of crime, and law enforcement practices. Results suggest managers apparently react more to the overall level of crime, especially acts of vandalism, than the crime rate, although the strength of association was found to be small.

2414. 58 IIIA5C POLENO Z. "Planned Dispersion of Recreation in Forests of the Suburban Zone." Lesnictví, Vol. 28, No. 3 (1982) In Czech with Russian, English, German, and French summaries. Pages 203-220. Regulating recreational use of suburban forests in order to preserve the ecosystem.

2415. 58 IIIA5D MCCOOL STEPHEN F., UTTER JACK "Recreation Use Lotteries: Outcomes and Preferences." Journal of Forestry, Vol. 80, No. 1 (1982), pages 10-11, 29. Analysis of a lottery administered for rationing recreational uses of the Middle Fork of the Salmon River indicated that a substantial minority of rejectees was still able to use the river, primarily by joining acquaintances who were successful in the lottery. Participants, including those who were rejected, rated the lottery above such alternatives as rationing on the basis of whitewater skill or knowledge, giving priority to first-time users, or requiring advance reservations.

2416. 58 IIIA5E BONNICKSEN T.M., STONE E.C. "Managing Vegetation within the U.S. National Parks: A Policy Analysis." Environmental Management, Vol. 6, No. 2. (1982) Pages 109-122 Brief history of the development of U.S. national park vegetation management policies from 1872 to the present. Ambiguities in policies are described and partially resolved. Alternative vegetation management objectives, consistent with those policies, are evaluated using quantitative data. Since a steady-state distribution of aggregation types is probably not present in most forest communities, the Park Service is generally restricted to pursuing process maintenance objectives for vegetation within national parks and monuments. A new alternative for managing vegetation in national parks that is based on a high resolution description of the presettlement forest community, called the reconstruction-simulation approach, is also presented.

2417. 58 IIIA5E CRABB P. "Gros Morne National Park, Newfoundland, and Parks Canada Policies." Environmental Conservation, Vol. 8, No. 4 (1981), pages 323-327.

2418. 58 IIIA5E LEONT'EV P. "An Old and Valuable Park (near Drokiya, Moldavian SSR)." Sel'sl Khoz Mold, No. 12 (1980) In Russian. Pages 52-53. Cited in Bibliography of Agriculture, Vol. 46, No. 1-2.

2419. 58 IIIA5E PETERSEN MARGARET Trends in Recreational Use of National Forest Wilderness. USDA Forest Service Research Note INT-319. (1981), 3 pages. Trends in recreational use are useful as predictors of the need for future management decisions. As more land has been added to the National Forest Wilderness System, increases in use have occurred primarily on areas established by 1965 where visitor use has been increasing at an average rate of 4 percent per year.

2420. 58 IIIA5E SALAZAR A.P., HUBER R.M. JR. "Ecuador's Active Conservation Program." Parks, Vol. 6, No. 4 (1982), pages 7-10. During five years of a comprehensive national park program, 12 wildland areas have been established as parks or reserves by interministerial decree.

2421. 58 IIIA5E STANKEY GEORGE H. "Wilderness Carrying Capacity: Management and Research Progress in the United States." Landscape Res., Vol. 5, No. 3 (1980), pages 6-11.

2422. 58 IIIA5E WASHBURNE RANDEL F. "Carrying Capacity Assessment and Recreational Use in the National Wilderness Preservation System." Journal of Soil and Water Conservation, Vol. 36, No. 3 (1981), pages 162-166. A 1979 survey of wilderness managers on problems, techniques, and management processes in the national wilderness preservation system (NWPS) indicated that carrying capacity assessment is far from complete and visitor-use densities are not clearly related to managers' perceptions of capacity situations or the need to ration use. A national assessment of recreational use in the NWPS suffers from the use of inconsistent units of measurement by the various agencies and nonsystematic data collection methods.

2423. 58 IIIA5G ARNOT R.H., GRANT K. "The Application of a Method for Terrain Analyses to Functional Land-Capability Assessment and Aesthetic Landscape Appreciation." Landscape Planning, Vol. 8, No. 3 (1981), pages 269-300. In the future, careful landscape management for the best use of the land will be essential and will have to include planning for sustained yield as well as location of open spaces and increasing areas of non-farm acreage uses extending beyond urban areas. Objective land classification is possible with the PUCE system (Pattern-Unit-Component-Evaluation) for terrain analyses, assessment and evaluation.

2424. 58 IIIA5G BALFOUR W.J. "National Scenic Areas and Their Implications for Forestry in the Northern Region." Scottish Forestry, Vol. 35, No. 4 (1981), pages 289-294.

2425. 58 IIIA5G BENSON ROBERT E., ULLRICH JAMES R. Visual Impacts of Forest Management Activities: Findings on Public Preferences. USDA Forest Service Research Paper INT-262 (1981), 14 pages. The visual impact of various timber harvest and road construction alternatives was measured using the Scenic Beauty Estimation Method. In general, partial harvesting is preferred to clearcutting; the less logging debris, the higher the preference, and the less soil disturbance and more revegetation along roads, the higher the preference.

2426. 58 IIIA5G BRUSH R.O. "Landform and Scenic Preference: A Research Note." Landscape Planning, Vol. 8, No. 3 (1981), pages 301-306. Relationship between landform and scenic preference has implications for landscape management. Physical features of wildland scenery explain a large amount of the variation in scenic preference.

2427. 58 IIIA5G BUHYOFF G.J., ARNDT L.K., PROPST D.B. "Interval Scaling of Landscape Preference by Direct and Indirect-Measurement Methods." Landscape Planning, Vol. 8, No. 3 (1981), pages 257-267. Investigation of the relationship between landscape preference metrics derived under an indirect method through application of the Law of Comparative Judgment and a more direct, less data-intensive magnitude-estimation method. Results for two landscape stimulus sets indicate extremely similar interval scales emerged from both techniques.

2428. 58 IIIA5G GREEN B. Countryside Conservation. The Protection and Management of Amenity Ecosystems. London, U.K. George Allen and Unwin. ISBN 0-04-719001-9. Resource Management Series No. 3. Wye College, Ashford, Kent, U.K. (1981), 249 pages. Cited in Forestry Abstracts, Vol. 42, No. 12. Development, scope and future prospects of conservation in Britain including chapters on the main semi-natural (farmland, woodlands, wetlands, etc.) and their management for amenity. Expansion of forestry is considered much less of a threat than modern agricultural methods and could, with appropriate management, become a major part of amenity resources.

2429. 58 IIIA5H ABSHER J. D., LEE R. G. "Density as an Incomplete Cause of Crowding in Backcountry Settings." Leisure Sciences, Vol. 4, No. 3 (1981), pages 231-247. The common-sense notion that crowding in backcountry settings is a phenomenon largely dependent upon sheer numbers of people must be reassessed in favor of more complex formulations that incorporate normative, motivational, and social organizational aspects.

2430. 58 IIIA5H BRATTON S.P., STROMBERG L.L., HARMON M.E. "Firewood-Gathering Impacts in Backcountry Campsites in

Great Smoky Mountains National Park." Environmental Management, Vol. 6, No. 1 (1982) Pages 63-71. Intensive human trampling in the center of the sites inhibited reproduction of tree species, whereas firewood gathering alone did not. In some cases where canopy opening had occurred, there was an increase in shrub and tree reproduction around the edge of the site.

2431. 58 IIIA5H BULTENA G., ALBRECHT D., WOMBLE P. "Freedom versus Control: A Study of Backpackers' Preferences for Wilderness Management." Leisure Sciences, Vol. 4, No. 3 (1981), pages 297-310. Rationing of public access to wildlands frequently is used by land management agencies to protect both physical resources and the quality of visitors' experiences. Backpackers at Mount McKinley National Park in Alaska supported the idea of rationing and were generally supportive of the backcountry management policies of the park.

2432. 58 IIIA5H BULTENA G., FIELD D., WOMBLE P. "Closing the Gates: A Study of Backcountry Use - Limitation at Mount McKinley National Park." Leisure Sciences, Vol. 4, No. 3 (1981), pages 249-267. Data suggest that the extant backcountry capacity levels in Mount McKinley National Park could be increased somewhat without compromising the quality of most visitors' experiences.

2433. 58 IIIA5H BURCH W. R. JR. "The Ecology of Metaphor - Spacing Regularities for Humans and Other Primates in Urban and Wildland Habitats." Leisure Sciences, Vol. 4, No. 3 (1981), pages 213-230. Traces the change from encouraging appreciation of nature to the restriction of access to nature. Data on nonhuman primates and higher social species demonstrate that the carrying capacity concept has limited empirical support. Transfer of concepts with limited empirical support to management realms of great ambiguity and controversy is a doubtful use of science and irresponsible management. A return to more objective and theoretically based research on spacing behavior in humans and other higher primates is suggested.

2434. 58 IIIA5H CANHAM H. O., CLINGER B. A. Characteristics and Economic Impact of Campers in New York State. School of Forestry, State Univ. of New York, College of Environmental Science and Forestry, Syracuse, NY 13210. (1981), 19 pages.

2435. 58 IIIA5H CLARK R. N. "Research Roles and Priorities for Effective Management of Off-Road Recreation Vehicles." In, Off-Road Vehicle Use: A Management Challenge. Richard N.L. Andrews and Paul F. Nowak, eds. Reproduced by USDA Forest Service, GPO 992-807. (1980), pages 245-258.

2436. 58 IIIA5H CLINGER B. A., CANHAM H. O. Characteristics of New York's Commercial Campgrounds. School of Forestry, State Univ. of New York, College of Environmental Science and Forestry, Syracuse, NY 13210. (1981), 24 pages.

2437. 58 IIIA5H CORMIER PAULA L., NYSTROM PEGGY S. Trends in New Hampshire Private Campgrounds During the Seventies. USDA Forest Service Research Paper NE-489 (1981), 12 pages. Growth of commercial camping enterprises during the period 1964-1980, campground characteristics, services and facilities, and the average costs and returns of operating a campground. Data presented reflect the 1979 calendar year and are based on a survey of 138 campgrounds conducted by the U.S. Forest Service in cooperation with the campground owners of New Hampshire.

2438. 58 IIIA5H MCCOOL S. F. "Off-Road Vehicles in National Park Areas: Some Information Needs." Leisure Sciences, Vol. 4, No. 3 (1981), pages 343-354. Identifies types of information needed to resolve off-road recreation vehicle-induced issues in the National Park System.

2439. 58 IIIA5H ROOME N.J. "The Use of National Nature Reserves by Access Permit Holders." Journal of Environmental Management, Vol. 14, No. 1. (1982) 57-70 Results of a survey of National Nature Reserve permit holders providing detailed information about the type of visitor, reasons for and nature of the visits, and information about reserve features of importance to these visits. Permit-holder use of national Nature Reserves is a highly variable but significant consideration in reserve management. Factors which appear to influence the demand for reserve use and the actual level of use are isolated.

2440. 58 IIIA5H VAN WAGTENDONK J. W. "The Effect of Use Limits on Backcountry Visitation Trends in Yosemite National Park." Leisure Sciences, Vol. 4, No. 3 (1981), pages 311-323. Backcountry use in Yosemite National Park increased drastically during the decade starting in the mid 1960's. Since 1975 use has leveled off due to the decreased popularity of backpacking in California. Use limits have been effective in shifting use from peak summer months as well as from heavily used trail heads and travel zones.

2441. 58 IIIA5H WHITE R. G., SCHREYER R. "Nontraditional Uses of the National Parks." Leisure Sciences, Vol. 4, No. 3 (1981), pages 325-341. Purposes of the study: (1) identify recreation activities seen as inappropriate to national parks, (2) identify reasons for inappropriateness, (3) relate reason to perceptions of the meaning of national parks. Definitions of park meaning and desired park experience tended to be general and did not

show any relation to appropriateness ratings. Personal anticipation in an activity appeared to be the most influential factor in such decisions. Park visitors appear to have only generalized conceptions of national parks as places and make decisions on acivities based on personal knowledge or assumed images of the activities.

2442. 58 IIIA5I TSYMEK A.A. "The Economic Effectiveness of the Recreational Functions of Forests." Lesnoe Khozyaistvo, No. 7 (1980) In Russian. Pages 18-19. Cited in Forestry Abstracts, Vol. 42, No. 8. Evaluation of the recreational function of forests in the socio-economic system of the USSR (on the basis of Marx/Engels doctrine).

2443. 58 IIIA6 SATJAPRADJA O. "Development of Silvo-pastoral Systems for Watershed Management." In, Experiences with Agroforestry on Java, Indonesia. Gadjah Mada Univ., Forestry Faculty, Bulaksumur, Yogyakarta, Indonesia. (1980) In Indonesian with an English summary. Pages 49-60. Cited in Forestry Abstracts, Vol. 42, No. 11.

2444. 58 IIIA7 BOCKSTAEL N. E., MCCONNELL K. E. "Theory and Estimation of the Household Production Function for Wildlife Recreation." Journal of Environmental Economics and Management, Vol. 8, No. 3 (1981), pages 199-214. This paper models the interaction between the household's behavior and publicly provided inputs into wildlife recreation; and shows how to compute benefits, assuming that the household production function is known. The household production function approach collapses to the simple travel cost approach when households are unable to substitute their own inputs for publicly provided inputs. Conditions under which the parameters of cost and preference functions can be identified are demonstrated. The conditions for identification are quite restrictive when several choices are endogenous.

2445. 58 IIIA7 EVEREST FRED H. Perspectives on National Forest Fishery Values for Land-Use Planning. Cal-Neva Wildl. Trans. Proceedings available from Wendell Miller, 10853 Mooney Flat Road, Smartsville, CA 95977 (1980), pages 64-70. Recent congressional legislation requires valuation of all major resources, including fisheries, in National Forest land-use plans. The value of angling recreation, however, is difficult to determine and must be estimated by indirect methods. This paper offers some perspectives on the accuracy and application of fishery values and valuation procedures for land-use planning.

2446. 58 IIIA7 KIMBALL T. L. Wildlife: The Real Test of Environmental Quality. The Horace M. Albright Conservation Lectureship, No. 21. Univ. of California College of Natural Resources, Dept. of Forestry and Resource Mgt. (1981), 26 pages.

2447. 58 IIIA7 VAUGHAN W. J., RUSSELL C. S. "An Analysis of Participation in Nonconsumptive Wildlife Recreation: Comment." Land Economics, Vol. 57, No. 2 (1981), pages 279-285.

2448. 58 IIIA7 Towards 2000. A Place for Wildlife in a Land-use Strategy. A Consultation Paper. U.K. Royal Society for Nature Conservation. (1981), 25 pages. Cited in Forestry Abstracts, Vol. 42, No. 10. Position of nature conservation in the UK and the effects of changes in the last 30 years including economic forces on rural land use decisions and ways in which those affecting agriculture and forestry could be influenced in favor of nature conservation.

2449. 58 IIIA8 CROSSMAN E.R.F.W., BARKER P.A., WAGAR J.A. "Cost Effectiveness in Managing Urban Forests." Trends in Urban Forestry, Vol. 18, No. 4 (1981), pages 38-42. Procedures for judging long-term cost consequences of urban tree managers' decisions are in the early stages of development.

2450. 58 IIIA8 GREGOIRE T.G., CARROLL J.E., BARRETT J.P., MITCHELL C.J., GOVE J.H. "A Survey of the Town Forest Resources in New Hampshire." Res Rep NH Agric Exp Stn, No. 81 (1980), 18 pages. Cited in Bibliography of Agriculture, Vol. 45, No. 11-12.

2451. 58 IIIA8 GULDEMOND J.L. "Urban Forest, Town Planning: Natural Boundaries." Ned Bosbouw Tijdschr, Vol. 52, No. 7/8 (1980) In Dutch. Pages 199-205. Cited in Bibliography of Agriculture, Vol. 45, No. 10.

2452. 58 IIIA8 METRO LAURA J., DWYER JOHN F., DRESCHLER ERWIN S. Forest Experiences of Fifth-grade Chicago Public School Students. USDA Forest Service Research Paper NC-216 (1981), 6 pages. Analyzes previous visits to a forest and the associated experiences, as well as the expectations of those who had not previously visited a forest. Recommends educational programs that focus on the urban forest.

2453. 58 IIIA8 MILLER R.W. Urban Forestry: Bringing the Forest to Our Communities. Publ Coop Ext Programs Univ. Wisc. Ext (1980), 2 pages. Cited in Bibliography of Agriculture, Vol. 45, No. 11-12.

2454. 58 IIIA8 MORROW RONALD A. "Urban Forestry in Colorado Springs, Colorado." Journal of Arboriculture, Vol. 8, No. 2 (1982), pages 34-39.

2455. 58 IIIA8 ROWNTREE R.A., WOLFE J.L. Abstracts of Urban Forestry Research in Progress - 1979. USDA Forest

Service General Technical Report NE-60 (1980), 72 pages. Cited in Forestry Abstracts, Vol. 43, No. 2.

2456. 58 IIIA8 TARAN I.V., BEKH I.A. "Recreation Activity in Forests Near Cities." Lesnoe Khozyaistvo, No. 6 (1980) In Russian. Pages 58-59. Cited in Forestry Abstracts, Vol. 42, No. 8. Recreational use and provision of recreational facilities in forests in the region of Novosibirsk, the largest city in Siberia.

2457. 58 IIIB1 BRUCE IAN A. "Making Projections of Wood Supply from Australian Forests." Australian Forestry, Vol. 44, No. 2 (1981), pages 102-108. Determinants of Australian wood supply are enumerated and a framework for ensuring consistency in future supply projections is presented. Sensitivity analysis is a useful tool for projecting wood supply in Australia. Some comments are made on the approaches that might be taken in future national projections.

2458. 58 IIIB1 IRLAND L.C., FIELD D.B. "Impacts of Suburbanization on Timber Growing: a Case Study of the State of Connecticut." Connecticut Woodlands, Vol. 45, No. 2 (1980), pages 16-24. Cited in Forestry Abstracts, Vol. 43, No. 1. Population growth and land use changes (1913-1970), forest resource data, history and status of forest ownership and use, trends in stumpage prices.

2459. 58 IIIB3 BRODIE J. DOUGLAS, TEDDER PHILIP L. "Regeneration Delay: Economic Cost and Harvest Loss." Journal of Forestry, Vol. 80, No. 1 (1982), pages 26-28. Failure to regenerate stands immediately after harvest results in losses of value and volume of yield. The amount of loss differs when the effect of delay is assessed for an individual stand or forestwide. For the forest, the loss will depend on methods of determining the allowable cut and on inventory age-class distributions. A regeneration delay that results from transitory physical or budgeting constraints will have a different effect than delays programmed into all future rotations. Losses that appear massive when assessed at the stand level may have little effect on the allowable cut, while failure to rapidly regenerate stands that are economically marginal may greatly affect allowable cut on some forests.

2460. 58 IIIB3 LEDIG F. THOMAS, PORTERFIELD RICHARD L. West Coast Tree Improvement Programs: a break even, cost-benefit analysis. USDA Forest Service Research Paper PSW-156 (1981), 8 pages. A return of 8 percent on investment appears feasible by using short rotations or by accompanying tree improvement with thinning. Interest rates, length of rotation, the inclusion of thinnings, and site index had greater effects on profitability than program design.

2461. 58 IIIB3 REILLY J.J. "Managing Plantations for Pulp and Paper Production." Appita, Vol. 35, No. 2 (1981), pages 199-203. Pulpwood and plantation requirements for a proposed pulp and/or paper mill in south-eastern Queensland.

2462. 58 IIIB3 WHITEHEAD DAVID "An Ecological Overview of Plantations Forestry." New Zealand Journal of Forestry, Vol. 26, No. 1 (1981), pages 14-19. There is little ecological harm in plantation forestry provided precautions are taken in management options.

2463. 58 IIIB4 MARSZALEK T. "Economic Problems of Improvement Cutting (in forest stands)." Sylwan, Vol. 124, No. 3 (1980) In Polish. Pages 1-14. Cited in Bibliography of Agriculture, Vol. 45, No. 9.

2464. 58 IIIB5 ANDERSON F.J. "Optimum Forest Rotation: Comment." Land Economics, Vol. 57, No. 2 (1981), pages 293-294.

2465. 58 IIIB5 CHANG S.J. "Determination of the Optimal Growing Stock and Cutting Cycle for an Uneven-Aged Stand." Forest Science, Vol. 27, No. 4. (1981) Pages 739-744. Maximization of forest value is the same as the maximization of land expectation value, thus presenting a unified approach to even-aged and uneven-aged management. Optimal growing stock and cutting cycle are sensitive to changes in interest rate, yet insensitive to changes in stumpage price.

2466. 58 IIIB5 HOTVEDT JAMES EDWARD Harvest Scheduling for Small Industrial Landowners: A Goal Programming Approach. Ph.D. Virginia Polytechnic Inst. & State Univ. (1980), 173 pages. Available through University Microfilms International.

2467. 58 IIIB5 NAUTIYAL J. C. "Optimum Forest Rotation: Reply." Land Economics, Vol. 57, No. 2 (1981), page 295.

2468. 58 IIIB5 YUNOV V.I. "Forest Utilization - Sustained Yield and Perpetuity." Lesnoe Khozyaistvo, No. 7 (1980) In Russian. Pages 42-44. Cited in Forestry Abstracts, Vol. 42, No. 8. Sustained yield in perpetuity as applicable in the regions of the USSR; comparisons with East European and western (European and North America) countries.

2469 58 IIIC HEIDARI HESHMATTOLAH Proposed Forest Road Policies and Procedures for the Iranian Forests. Ph.D. Colorado State Univ. (1980), 154 pages. Available through University Microfilms International.

2470. 58 IIIC "Forests and Public Roads." Der Forst- und Holzwirt, Hannover, No. 1 (1982) In German. Pages

1-19. Six papers from a meeting discussing economic, social and cultural conflicts and prospective solutions if public roads are planned and constructed in forests.

2471. 58 IIID1 HAM D.L. Fire in the Forest: Good and Bad. Circ Clemson Univ. Coop Ext Serv, June (1980), 8 pages. Cited in Bibliography of Agriculture, Vol. 45, No. 7.

2472. 58 IIID4 KELLEY LOIS MARIE An Evaluation of the Human Causes of Forest Depletion. Ph.D. Univ. of Washington (1980), 186 pages. Available through University Microfilms International.

2473. 58 IIID4 NOVÁČEK M. "Damages of Forest Stands by Camping." Lesnictví, Vol. 28, No. 2 In Czech with Russian, English, German, and French summaries. Pages 159-172.

2474. 58 IIID4 SCHUETT P. "Current Damages in Forests - Attempt of an Inventory." Holz- Zentralblatt, Stuttgart, No. 25 (1982) In German. Pages 369-372. Five main stress factors, mainly air pollutants, are discussed in relation to their role in damaging spruce, fir, beech, and pine trees in Europe. A broad interdisciplinary research program is necessary to investigate reasons and prevention methods.

2475. 58 IIID4 VINŠ B., POSPÍŠIL F., KUČERA J. "Evaluation of Development of Emission Damages in the Protected Landscape Area of the Jizerské Mts." Lesnictví, Vol. 28, No. 2 (1982) In Czech with Russian, English, German, and French summaries. Pages 87-102.

2476. 58 IIIE AUDEMA M. "Forests and Rural Management in the Mediterranean Region (France)." Bull Tech Inf, Mar/April (1980) In French. Pages 83-89. Cited in Bibliography of Agriculture, Vol. 45, No. 7.

2477. 58 IIIE BONT A. "Consolidation of Small Private Forest Holdings: Is there a Proper Ratio between Investment and Return?" Schweizersiche Zeitschrift für Forstwesen, Vol. 132, No. 3 (1981) In German. Pages 197-200. Cited in Forestry Abstracts, Vol. 42, No. 11. In the Thurgan area of Switzerland an initial investment of 9000 Swiss francs per hectare would result in short-term savings in operating costs, and short-term and long-term increases in value of the stand that over 10 years would yield 1960 Swiss francs per hectare on the investment.

2478. 58 IIIE BUSBY R.J.N., GRAYSON A.J. Investment Appraisal in Forestry with Particular Reference to Conifers in Britain. Booklet, Forestry Commission, U.K. No. 47 (1981), 90 pages. Cited in Forestry Abstracts, Vol. 42, No. 9.

2479. 58 IIIE DRINIĆ PETAR "Planning of Forest Management in Yugoslavia." Proceedings, XVII IUFRO World Congress. Division 4 (1981), In German with English summary. Pages 385-397.

2480. 58 IIIE ELIZAROV A.F. "Planning of Forest Management in Finland." Lesn Khoz, No. 2 (1980) In Russian. Pages 70-72. Cited in Bibliography of Agriculture, Vol. 46, No. 3.

2481. 58 IIIE HALL T.H. "Forest Management Decision-Making: Art or Science?" Forestry Chronicle, Vol. 57, No. 5 (1981), pages 233-238. A methodology to encourage more creative design in forest planning using the descriptive capabilites of simulation modeling in tandem with the prescriptive capabilites of graphical evaluation techniques, to facilitate the use and interpretation of technical forestry information in decision-making problems. Emphasizes a need for an overview of long-term resource behavior as a prerequisite to, and a framework for, forest planning.

2482. 58 IIIE JOEBSTL H.A. "Cost and Performance Calculation in Forestry Enterprises - Computer Assisted Accounting." Schriftenreihe des Instituts für Forstliche Betriebswirtschaft und Forstpolitik, Vienna, Vol. 6 (1981) In German. 168 pages. Basics of costing problems in forestry and a computer assisted accounting model which is in use for larger Austrian forest enterprises.

2483. 58 IIIE MAWSON J.C., MACK R.J. "Inventory Costs on Small Forests." Journal of Forestry, Vol. 80, No. 3 (1982), pages 165-167. For one to four dollars per acre, the manager of a small forest can apply standard field techniques and complete systems to derive adequate information for decisions on intensive silviculture.

2484. 58 IIIE PLANK M.E. Estimating Value and Volume of Ponderosa Pine Trees by Equations. USDA Forest Service Research Paper PNW-283 (1981), 13 pages. Equations for estimating the selling value and tally volume for ponderosa pine lumber from the standing trees.

2485. 58 IIIE POHOŘELÝ M. "Building a Data Base for the Branch of Forest Management." Lesnictví, Vol. 28, No. 3 (1982) In Czech with Russian, English, German, and French summaries. Pages 181-194.

2486. 58 IIIE SIRAKOV KH. "Economical Problems of Effectiveness and Quality in Forestry." Gorsko Stopanstvo, Vol. 36, No. 8 (1980) In Bulgarian. Pages 25-29. Cited in Bibliography of Agriculture, Vol. 45, No. 10.

2487. 58 IIIE SPELTER H. FORDAT - An Information Retrieval System for Forest Economic Data. USDA Forest Service General Technical Report FPL 33 (1981), 15 pages. Time series data frequently used in Forest Service studies of wood products consumption have been stored in a data retrieval system on the computer of the University of Wisconsin. The data cover activity in wood processing from forest to end use. Prices and costs at succeeding stages, historical usage, production rates, and other relevant data to wood use analysis were compiled. The system is available on-line and may be accessed directly or the data may be obtained in printed form by interested users.

2488. 58 IIIE VALFER E.S., KIRBY M.W., SCHWARZBART G. Returns on Investments in Management Sciences: Six Case Studies. USDA Forest Service General Technical Report PSW-52 (1981), 14 pages. In 1962, the Management Sciences Staff was organized in Berkeley, Calif., as the internal consultant to the USDA Forest Service. From then until 1979, the staff conducted 41 major studies. Although the rate of implementing recommendations from these studies was high, a more formal self-assessment was considered advisable. Six case studies were analyzed: size of Ranger Districts, solid waste management, radio telecommunications design and management, computer support systems, ADVENT, and rock aggregates transport. All six studies have proved to be good management investments.

2489. 58 IIIE VON GADOW K. "Formal Management Methods in Forestry: The Decision Analysis." South African Forestry Journal, No. 118. (1981) Pages 7-13. System is based on the logical concept of combining a set of objectives and a set of alternatives where use is made of additive utilities. Main features of the process are described and illustrated by means of forestry examples.

2490. 58 IIIE ZHELIBA B.N. "Methodological Aspects of Evaluating the Intensity and Effectiveness of Production in Forestry." Lesnoe Zhurnal, No. 3 (1980) In Russian. Pages 115-119. Cited in Forestry Abstracts, Vol. 42, No. 9. Twelve different econometric indices used in Belorussia to evaluate the intensity and efficiency of production in forestry including: mean sum spent per ha per annum; number of workers per 1000 ha; stumpage; gross product and profit per unit of cash spent, per unit of labor force, and per unit of area.

2491. 58 IVA1A JULLANDER I. "Advnces in Research and Technology in the Forest Industry." Sven Papperstidn Swed Pap J, Vol. 83, No. 9 (1980) In Italian. Pages 233-238. Cited in Bibliography of Agriculture, Vol. 46, No. 1-2.

2492. 58 IVA1B CANHAM H. O., LE BLANC E. J. Economic Impact of the Timber Based Industries in the Southern Tier West

Region of New York. School of Forestry, S.U.N.Y. College of Environmental Science and Forestry, Syracue, NY. (1981), 21 pages.

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2574. 58 VB3 WISEMAN A.C., SEDJO R.A. "Welfare Economics (society's optimum use of resources) and the Log Export Policy Issue." In, Issues in U.S. International Forest Products Trade. Proceedings of workshop - Washington, D.C., Mar. 6-7. 1980. Research Paper No. R-23. Resources for the Future. (1981), pages 187-215. Cited in Forestry Abstracts, Vol. 43, No. 3.

2575. 58 VB4 LUPPOLD WILLIAM GEORGE Demand Supply and Price of Hardwood Lumber: An Econometric Study. Ph.D. Virginia Polytechnic Inst. & State Univ. (1981), 151 pages. Available through University Microfilms International.

2576. 58 VB5A HAYLOCK E. "Finland All Set to Supply Europe's Fiber Needs in the 80s (Pulp and Paper exports)." Paper, Vol. 194, No. 1 (1980), pages 15-17, 47. Cited in Bibliography of Agriculture, Vol. 45, No. 8.

2577. 58 VB5B GELDART H.G., CARROLL M.R. Marketing Wood Chips from Alberta Sawmills. Bulletin 21, Faculty of Agric. and Forestry, Univ. of Alberta (1980), 24 pages. Primary objectives of this study were to identify the pricing systems incorporated in marketing chips and to analyze the effect of marketing wood chips on the utilization of the timber resource. Descriptive case study and comparative analysis were used. Findings: two pricing systems exist in the marketing and procurement of wood chips from sawmills to pulpmills (uniform pricing and straight-line pricing). These two systems exist because of: (1) the location of pulpmills and sawmills with respect to one another, and (2) the respective transport costs incurred in moving wood chips from sawmills to pulpmills. Transport costs and the pricing policy of the pulpmill are the major factors restricting the utilization of wood chips by pulp mills. The uniform pricing system resulted in a greater degree of utilization of wood chips from sawmills in Alberta. A potential for increased utilization exists through improving the pricing mechanisms to guide the flow of resources into efficient end-use products.

2578. 58 VC1 DE STEIGUER J.E. "Forestland Market Values." Journal of Forestry, Vol. 80, No. 4 (1982), pages 214-216. Forestland values in Appalachia, the Southeast, and the Delta states increased at rates above the rate of inflation between 1971 and 1979. Compared to alternative land uses, forestry has low value. Per-acre selling price of forestland declined as size of the transaction increased and began to stabilize for tracts of 200 acres or more in area.

2579. 58 VC1 MCKILLOP WILLIAM, ADAMS DARIUS M., HAYNES RICHARD W. "National Impacts of Softwood Product Price Increases." Journal of Forestry, Vol. 79, No. 12 (1981), pages 807-810. Under prices projected for the period 1990-2030, U.S. consumption of softwood lumber would average 9 billion board feet per year less than if prices were stabilized at 1977 levels (in constant dollars). Softwood plywood consumption would average 5.5 billion square feet less per year and annual U.S. softwood sawlog consumption some 2 billion cubic feet less. Annual employment in softwood lumber and plywood manufacturing

would be lower by 70 thousand manyears (33 percent) and payrolls by $400 million per year on the average. Losses to consumers due to rising prices would average $5 billion (constant 1967 dollars) per year over the 1990-2030 period, and the loss in residential construction activity is estimated to be 86 thousand units (4 percent) per year. If relative prices rise, displacement of wood products by nonrenewable substitutes such as concrete and steel will increase energy needs and create more pollution in the course of their manufacture.

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